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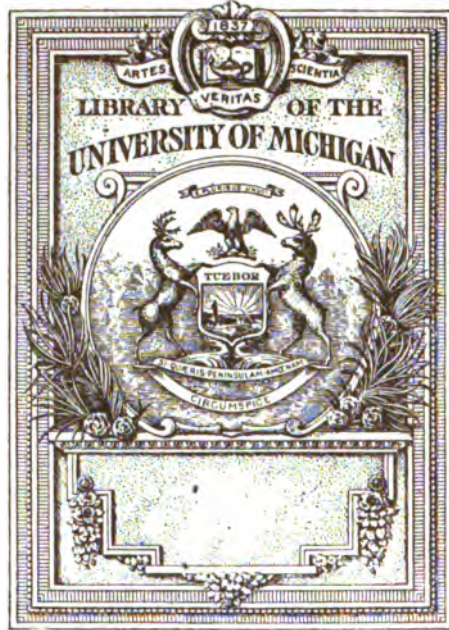
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# ATLAS

To Accompany a Report on the  
Fishes of Illinois

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S. A. FORBES      R. E. RICHARDSON



QH  
105  
I3  
A4  
atlas



STATE OF ILLINOIS  
DEPARTMENT OF REGISTRATION AND EDUCATION  
FRANCIS W. SHEPARDSON, Director

*of the State Laboratory of*  
DIVISION OF THE  
NATURAL HISTORY SURVEY  
STEPHEN A. FORBES, Chief

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# Maps

## Showing Distribution of Illinois Fishes to Accompany a Report on the Fishes of Illinois

BY

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AND

ROBERT EARL RICHARDSON, A.M.



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AUTHORITY OF THE STATE OF ILLINOIS



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ILLINOIS STATE JOURNAL Co., STATE PRINTERS  
1919  
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## LIST OF MAPS

The general map of the distribution of collections (Map IV.) shows, by the location of the red spots, all the localities from which collections of fishes have been made by us in the work of the Natural History Survey. The distribution maps for the various species indicate in the same way all the localities from which representatives of the species have been taken. *For an accurate idea of the significance of these species maps, each should be compared with Map IV.*

The following numbered list of the counties of the state corresponds to the figures on these maps.

|                 |                |                |
|-----------------|----------------|----------------|
| 1. Jo Daviess   | 35. Hancock    | 69. Madison    |
| 2. Stephenson   | 36. McDonough  | 70. Bond       |
| 3. Winnebago    | 37. Fulton     | 71. Fayette    |
| 4. Boone        | 38. Mason      | 72. Effingham  |
| 5. McHenry      | 39. Tazewell   | 73. Jasper     |
| 6. Lake         | 40. McLean     | 74. Crawford   |
| 7. Cook         | 41. Vermillion | 75. Lawrence   |
| 8. Du Page      | 42. Champaign  | 76. Richland   |
| 9. Kane         | 43. Piatt      | 77. Clay       |
| 10. DeKalb      | 44. Dewitt     | 78. Marion     |
| 11. Ogle        | 45. Logan      | 79. Clinton    |
| 12. Lee         | 46. Menard     | 80. St. Clair  |
| 13. Carroll     | 47. Cass       | 81. Monroe     |
| 14. Whiteside   | 48. Schuyler   | 82. Randolph   |
| 15. Rock Island | 49. Brown      | 83. Washington |
| 16. Mercer      | 50. Adams      | 84. Perry      |
| 17. Henry       | 51. Pike       | 85. Jefferson  |
| 18. Bureau      | 52. Scott      | 86. Wayne      |
| 19. Putnam      | 53. Morgan     | 87. Edwards    |
| 20. La Salle    | 54. Sangamon   | 88. Wabash     |
| 21. Kendall     | 55. Christian  | 89. White      |
| 22. Grundy      | 56. Macon      | 90. Hamilton   |
| 23. Will        | 57. Moultrie   | 91. Franklin   |
| 24. Kankakee    | 58. Douglas    | 92. Jackson    |
| 25. Iroquois    | 59. Edgar      | 93. Williamson |
| 26. Ford        | 60. Clark      | 94. Saline     |
| 27. Livingston  | 61. Coles      | 95. Gallatin   |
| 28. Marshall    | 62. Cumberland | 96. Hardin     |
| 29. Woodford    | 63. Shelby     | 97. Pope       |
| 30. Stark       | 64. Montgomery | 98. Johnson    |
| 31. Peoria      | 65. Macoupin   | 99. Union      |
| 32. Knox        | 66. Greene     | 100. Alexander |
| 33. Warren      | 67. Calhoun    | 101. Pulaski   |
| 34. Henderson   | 68. Jersey     | 102. Massac    |

I. & II. The three sections of Illinois, northern, central, and southern, and the ten stream systems of the state: I., the Galena District, II., the Rock River System, III., the Illinois River System, IV., the Lake Michigan drainage, V., the Mississippi River drainage, VI., the Kaskaskia River System, VII., the Wabash System, VIII., the Big Muddy River System, IX., the Saline River System, and X., the Cairo District.

III. Glacial geology of Illinois.

IV. Localities from which collections were made.

V.—CII. Distribution of species.

CIII. Northern species (●) and southern species (▲) in Illinois.



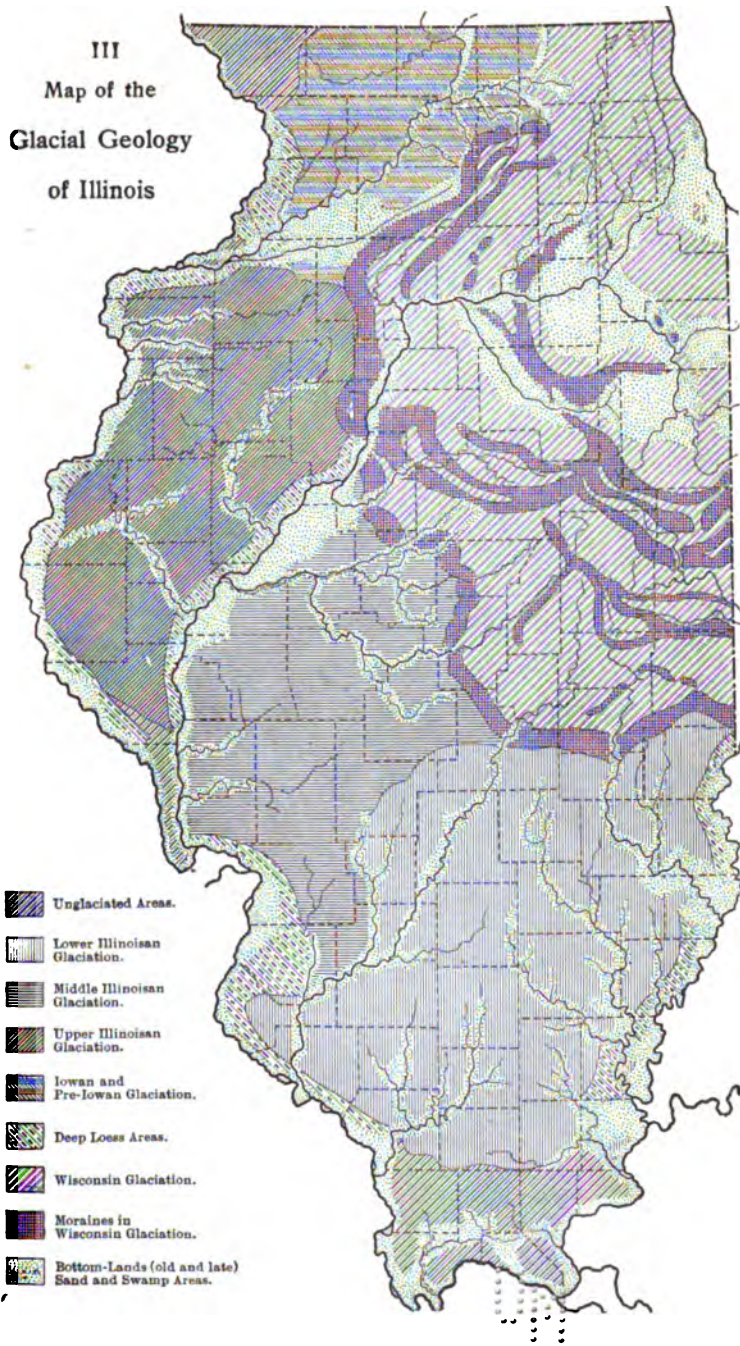
|  | MAP NO   |   | MAP No. |
|--|----------|---|---------|
| Banded Darter, <i>Etheostoma zonale</i> .....                | XCVII    | <i>Notropis cayuga</i> .....                                | XXXIII  |
| Big-eyed Chub, <i>Hybopsis amblops</i> .....                 | XLIX     | <i>Notropis gilberti</i> .....                              | XXXVI   |
| Black Bullhead, <i>Ameiurus melas</i> .....                  | LV       | <i>Notropis heterodon</i> .....                             | XXXIV   |
| Black Crappie, <i>Pomoxis sparoides</i> .....                | LXXXI    | <i>Notropis illecebrosus</i> .....                          | XXXVII  |
| Black-head Minnow, <i>Pimephales promelas</i> .....          | XXVII    | <i>Notropis jeffanus</i> .....                              | XLII    |
| Black-sided Darter, <i>Hadropterus aspro</i> ..              | LXXXVII  | <i>Oporocodrus emiliae</i> .....                            | XXX     |
| Blackfin, <i>Notropis umbracilis atripes</i> ....            | XLV      | Orange-spotted Sunfish, <i>Lepomis humilis</i>              | LXXXVII |
| Bluegill, <i>Lepomis pallidus</i> .....                      | LXXXVIII | Pirate-perch, <i>Aphredoderus sayanus</i> ....              | LXIX    |
| Blunt-nosed Minnow, <i>Pimephales notatus</i> .....          | XXVIII   | Pumpkinseed, <i>Eupomotis gibbosus</i> ....                 | LXXXIX  |
| Blunt-nosed River Carp, <i>Carpiodes difformis</i> .....     | XIII     | Quillback, <i>Carpiodes velifer</i> .....                   | XIV     |
| <i>Boleichthys fusiformis</i> .....                          | XCVIII   | Rainbow Darter, <i>Etheostoma caeruleum</i>                 | XCV     |
| <i>Boleosoma camurum</i> .....                               | XCI      | Red-bellied Dace, <i>Chrosomus erythrogaster</i> .....      | XXIV    |
| Brindled Stonecat, <i>Schilbeodes mirus</i> ..               | LIX      | Redfin, <i>Notropis lutrensis</i> .....                     | XXXIX   |
| Brook Silverside, <i>Labidesthes sicculus</i> ..             | LXXVIII  | Red-mouth Buffalo, <i>Ictiobus cyprinella</i>               | IX      |
| Bullhead Minnow, <i>Chloa vigiliaz</i> .....                 | XXXII    | River Chub, <i>Hybopsis kentuckiensis</i> ....              | LI      |
| Channel-cat, <i>Ictalurus punctatus</i> .....                | LII      | Rock Bass, <i>Ambloplites rupestris</i> .....               | LXXXIII |
| Chub-sucker, <i>Erimyzon succetta oblongus</i>               | XVI      | Rosy-faced Minnow, <i>Notropis rubrifrons</i>               | XLIV    |
| Common Pike, <i>Esox lucius</i> .....                        | LXII     | Round Sunfish, <i>Centrarchus macrochirus</i>               | LXXII   |
| Common Red-horse, <i>Moxostoma aureolum</i> .....            | XXI      | Sand Darter, <i>Ammocrypta pellucida</i> ....               | XCII    |
| Common River Carp, <i>Carpoides carpio</i> ..                | XII      | Sheepshead, <i>Aplodinotus grunniens</i> ....               | CII     |
| Common Shiner, <i>Notropis cornutus</i> ....                 | XLI      | Shiner, <i>Notropis atherinoides</i> .....                  | XLIII   |
| Common Sucker, <i>Catostomus commersonii</i> .....           | XVIII    | Short-headed Red-horse, <i>Moxostoma breviceps</i> .....    | XXII    |
| <i>Cottogaster shumardi</i> .....                            | LXXXVIII | Short-nosed Gar, <i>Lepisosteus platostomus</i>             | VI      |
| Dogfish, <i>Ameia calva</i> .....                            | VII      | Silver-mouthed Minnow, <i>Erycymba buccata</i> .....        | XLVI    |
| <i>Etheostoma jessei</i> .....                               | XCIV     | Silvery Minnow, <i>Hybognathus nuchalis</i>                 | XXV     |
| <i>Etheostoma squamiceps</i> .....                           | XCVI     | Small-mouth Buffalo, <i>Ictiobus bubalus</i>                | XI      |
| Fan-tailed Darter, <i>Etheostoma flabellare</i>              | XCVII    | Small-mouthed Black Bass, <i>Micropterus dolomieu</i> ..... | LXXX    |
| <i>Fundulus dispar</i> .....                                 | LXIV     | Speckled Bullhead, <i>Ameiurus nebulosus</i>                | LIV     |
| Gizzard-shad, <i>Dorosoma cepedianum</i> ....                | VIII     | Spot-tailed Minnow, <i>Notropis hudsonius</i>               | XXXVIII |
| Golden Shiner, <i>Abramis crysoleucas</i> ....               | XXXI     | Spotted Shiner, <i>Hybopsis diarmilla</i> ....              | XLVIII  |
| Gray Pike, <i>Stizostedion canadense griseum</i>             | LXXXIII  | Spotted Sucker, <i>Moxostoma melanops</i> ..                | XVII    |
| Green-sided Darter, <i>Diplexion bleannius</i>               | LXXXIX   | Steel-colored Minnow, <i>Notropis whippelli</i>             | XL      |
| <i>Hadropterus phoxocephalus</i> .....                       | LXXXVI   | Stonecat, <i>Noturus flavus</i> .....                       | LVII    |
| Hogsucker, <i>Catostomus nigriceps</i> .....                 | XIX      | Stone-roller, <i>Campostoma anomalum</i> ....               | XXIII   |
| Horned Dace, <i>Semotilus atromaculatus</i> ..               | XXIX     | Storer's Chub, <i>Hybopsis storerianus</i> ....             | L       |
| <i>Hybognathus nuchalis</i> .....                            | XXV      | Straw-colored Minnow, <i>Notropis bleannius</i> .....       | XXXV    |
| <i>Hybognathus nubilus</i> .....                             | XXVI     | Sucker-mouthed Minnow, <i>Phenacobius mirabilis</i> .....   | XLVII   |
| Johnny Darter, <i>Boleosoma nigrum</i> .....                 | XC       | Tadpole Cat, <i>Schilbeodes gyrtus</i> .....                | LVIII   |
| Lake Carp, <i>Carpoides thompsoni</i> .....                  | XV       | Top-minnow, <i>Fundulus notatus</i> .....                   | LXV     |
| Large-mouthed Black Bass, <i>Micropterus salmoides</i> ..... | LXXXI    | Trout-perch, <i>Percopsis guttatus</i> .....                | LXVII   |
| Least Darter, <i>Microperca punctulata</i> ....              | XCIX     | Viviparous Top-minnow, <i>Gambusia affinis</i> .....        | LXVI    |
| <i>Lepomis microchirus</i> .....                             | LXXV     | Wall-eyed Pike, <i>Stizostedion vitreum</i> ....            | LXXXII  |
| Little Pickerel, <i>Esox vermiculatus</i> .....              | LXI      | Warmouth Bass, <i>Chenobryttus gulosus</i> ..               | LXXIV   |
| Log-perch, <i>Percina caprodes</i> .....                     | LXXXV    | White Bass, <i>Roccus chrysops</i> .....                    | C       |
| Long-eared Sunfish, <i>Lepomis megalotis</i>                 | LXXXVI   | White Crappie, <i>Pomoxis annularis</i> ....                | LXX     |
| Long-nosed Gar, <i>Lepisosteus osseus</i> .....              | V        | White-nosed Sucker, <i>Moxostoma anisurum</i> .....         | XX      |
| Manona Top-minnow, <i>Fundulus diaphanus menomae</i> .....   | LXIII    | Yellow Bass, <i>Morone interrupta</i> .....                 | CI      |
| Mongrel Buffalo, <i>Ictiobus urus</i> .....                  | X        | Yellow Bullhead, <i>Ameiurus natalis</i> ....               | LIII    |
| Mud-cat, <i>Leptostichus okeanos</i> .....                   | LVI      | Yellow Perch, <i>Perca flavescens</i> .....                 | LXXXIV  |
| Mud-minnow, <i>Umbra limi</i> .....                          | LX       |   |         |

I & II  
Stream systems  
and  
Sections of  
Illinois



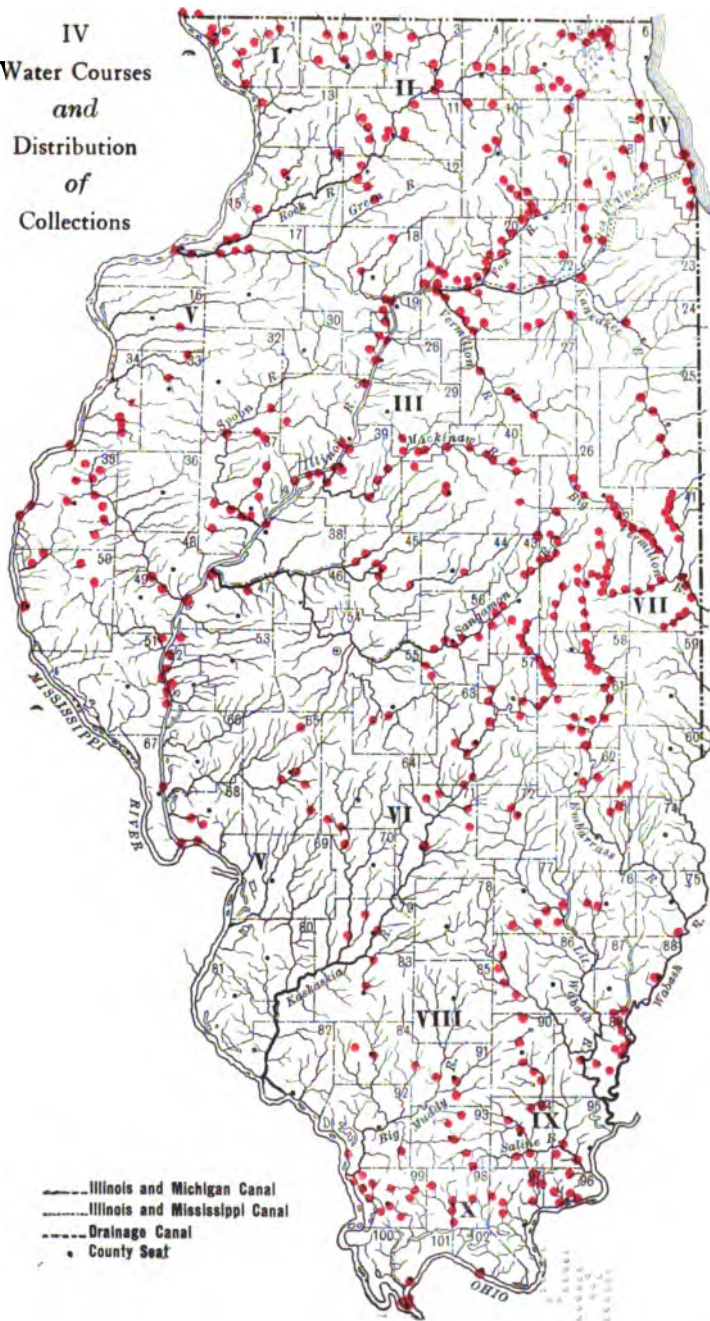


III  
 Map of the  
 Glacial Geology  
 of Illinois



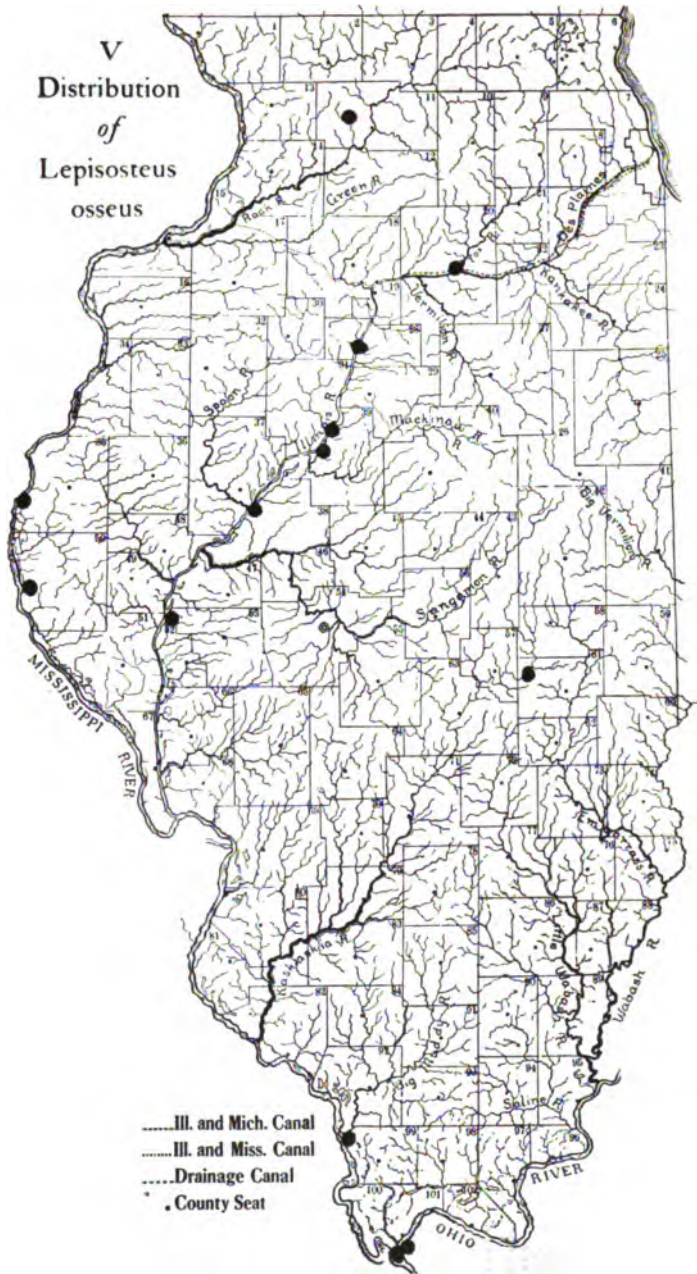


IV  
 Water Courses  
 and  
 Distribution  
 of  
 Collections





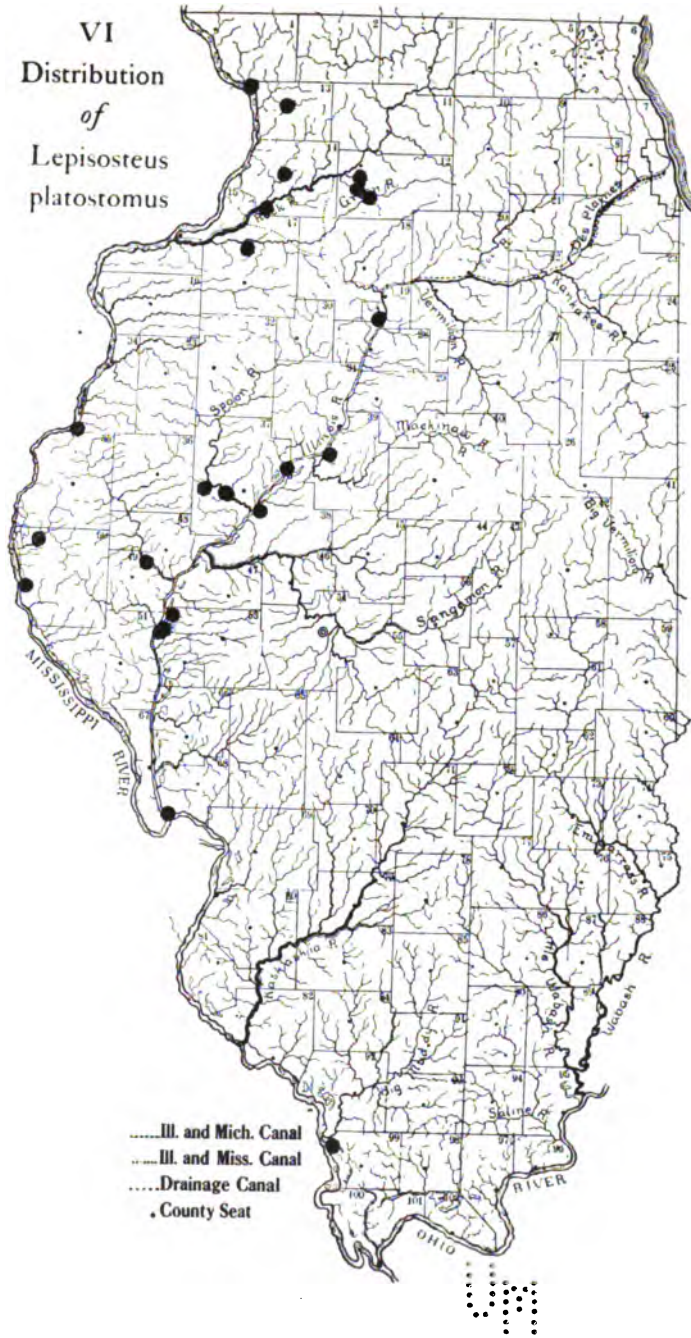
V  
 Distribution  
 of  
*Lepisosteus*  
*osseus*





4

VI  
Distribution  
of  
*Lepisosteus  
platostomus*



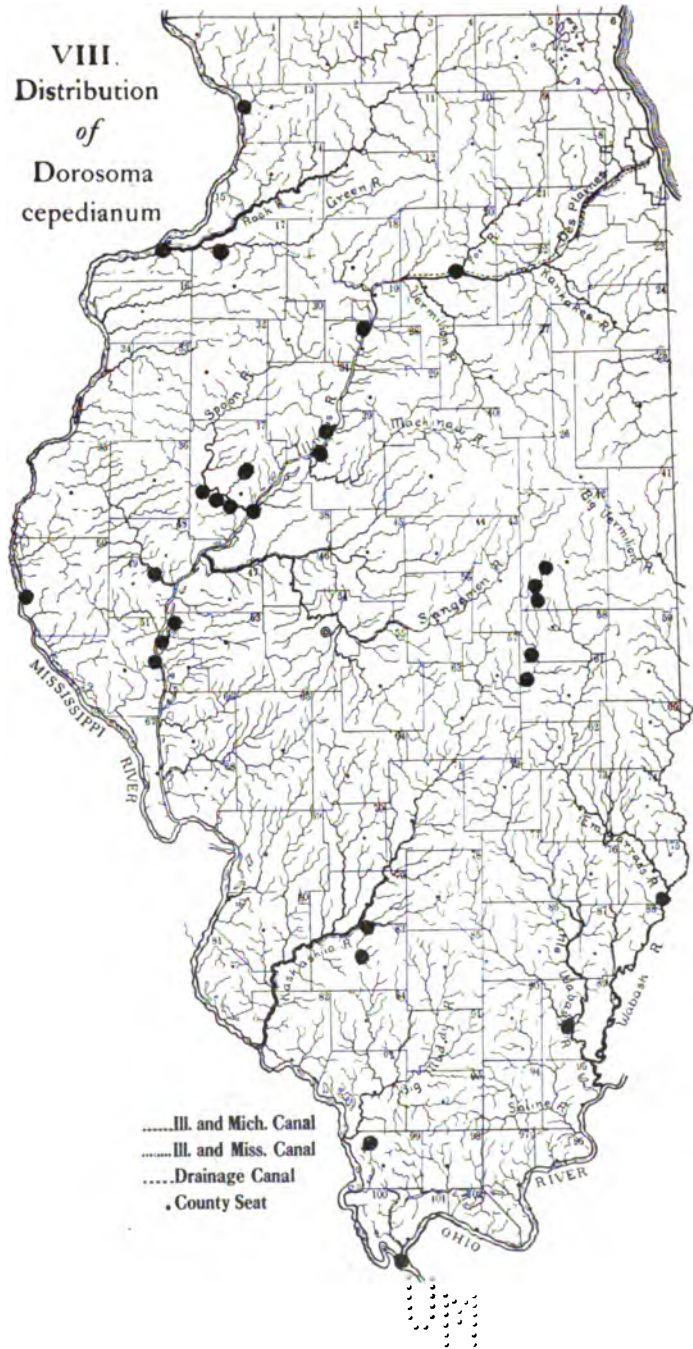


VII  
 Distribution  
 of  
*Amia calva*



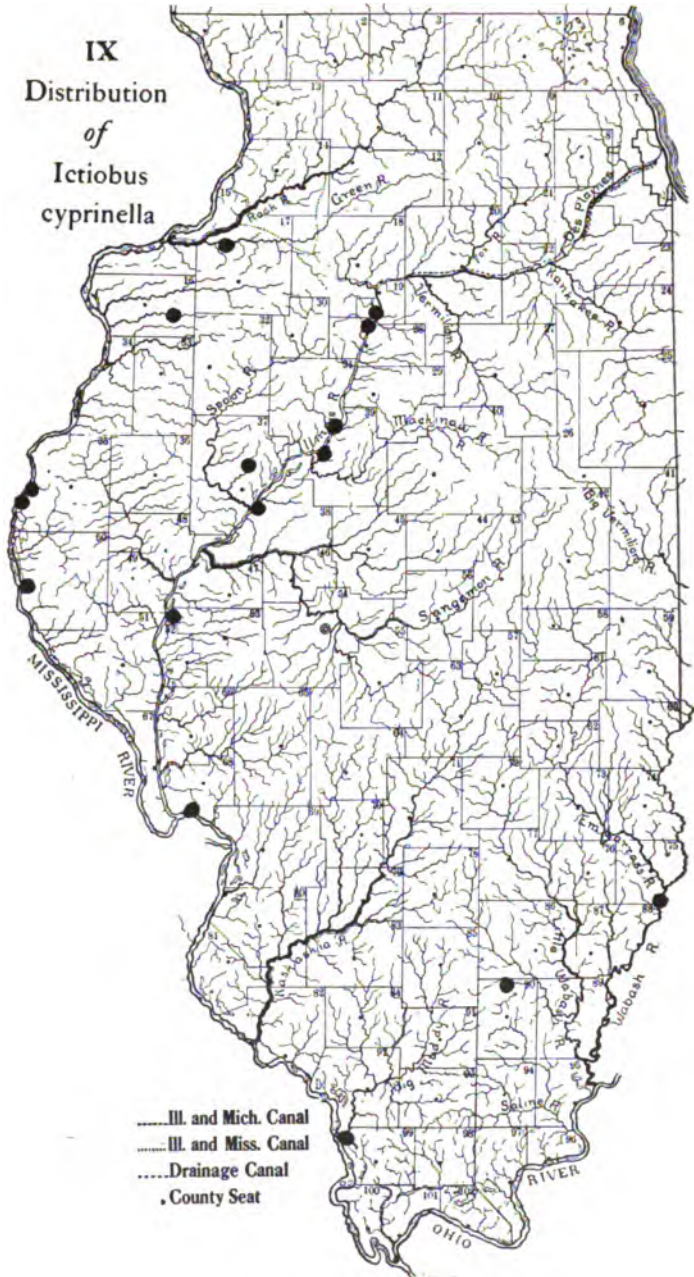


VIII.  
 Distribution  
 of  
*Dorosoma*  
*cepedianum*





IX  
 Distribution  
 of  
*Ictiobus  
 cyprinella*





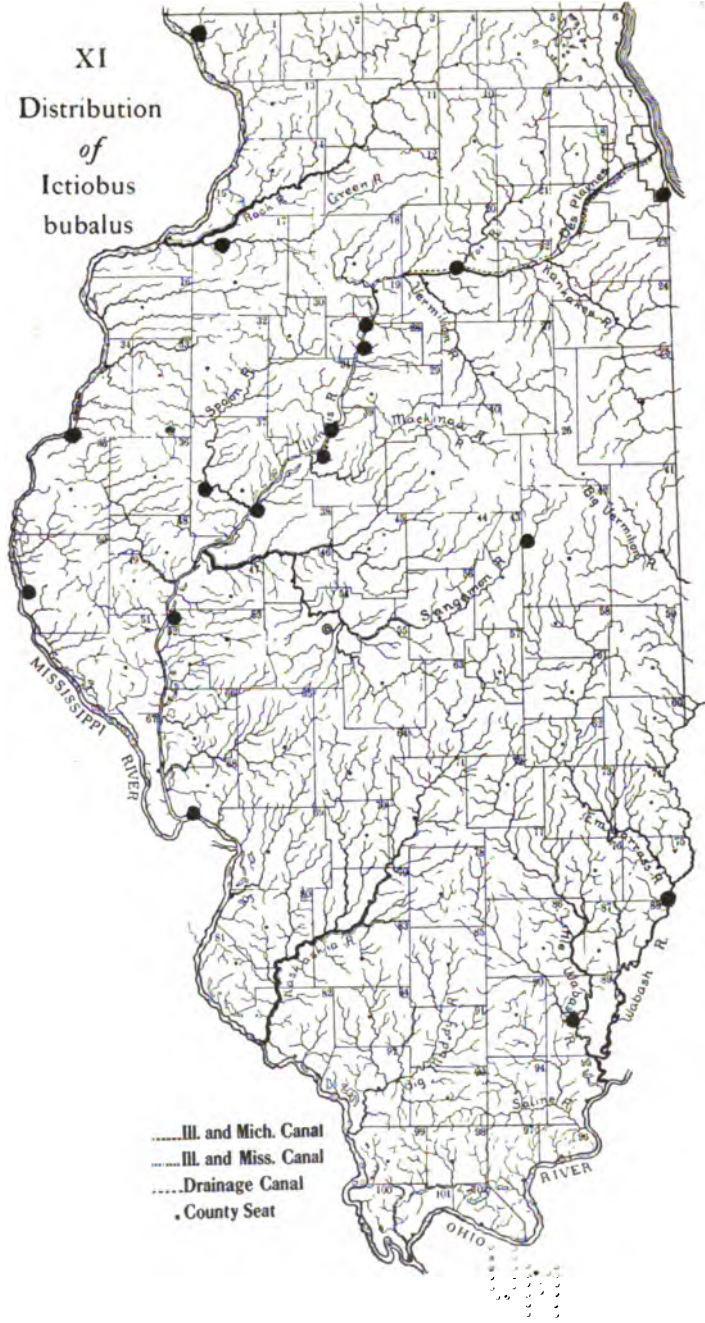
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X  
 Distribution  
 of  
*Ictiobus*  
 urus



44

XI  
 Distribution  
 of  
*Ictiobus*  
*bubalus*



44

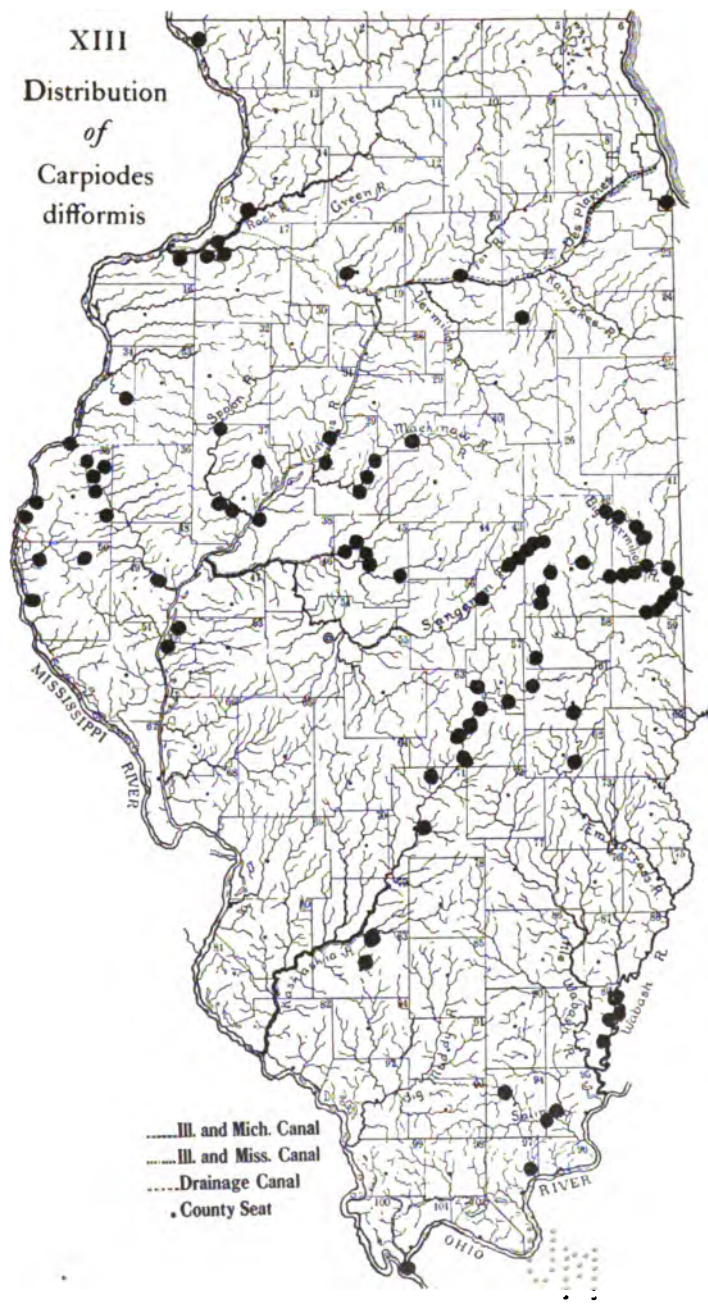
XII  
 Distribution  
 of  
*Carpoides*  
*carpio*



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat

4

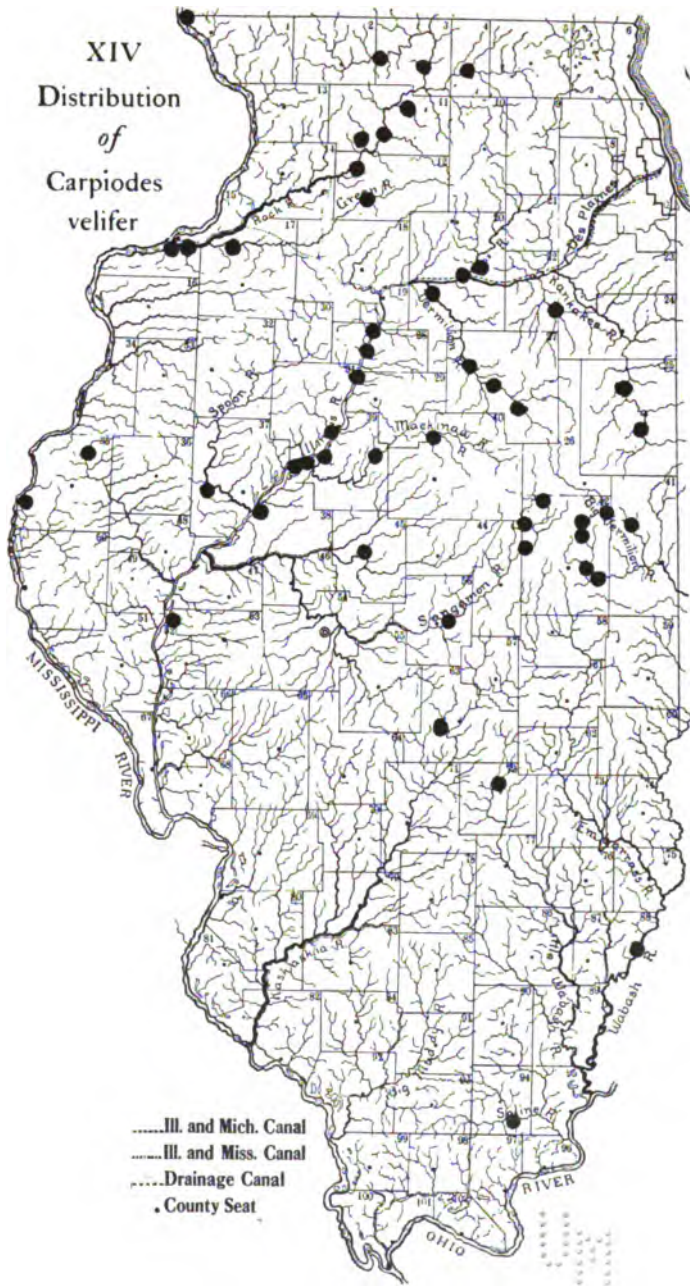
XIII  
 Distribution  
 of  
*Carpoides*  
*difformis*





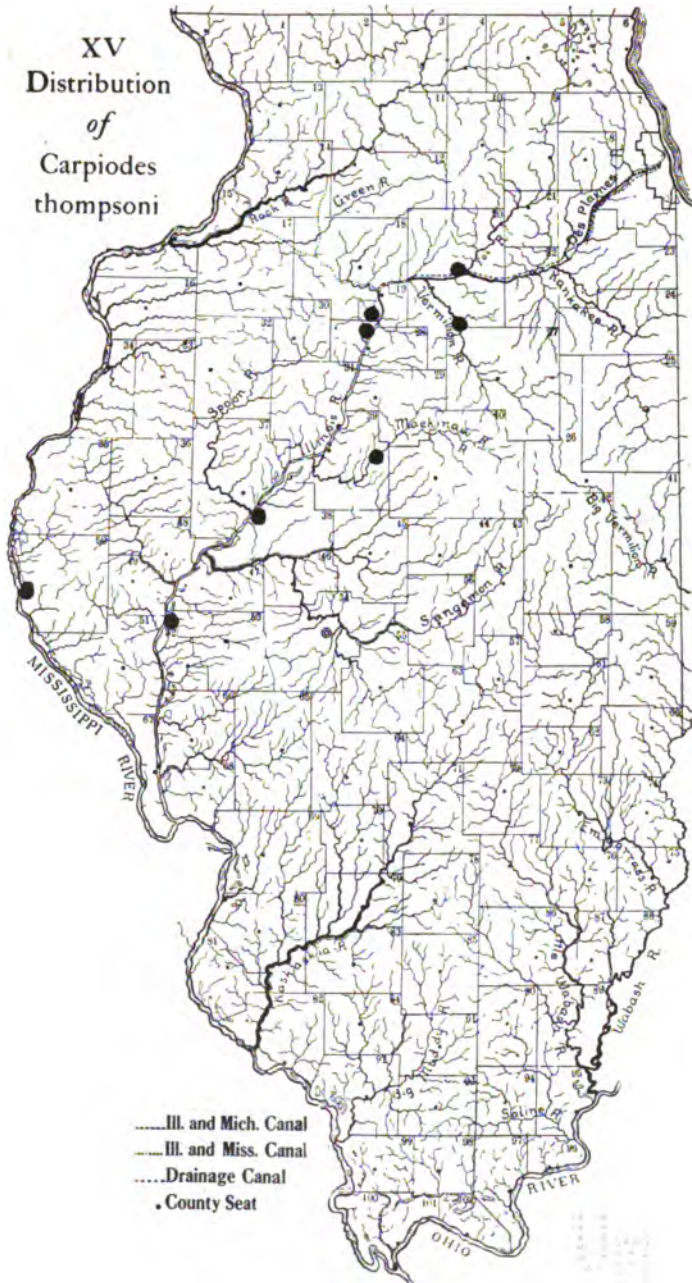
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XIV  
 Distribution  
 of  
*Carpodes  
 velifer*



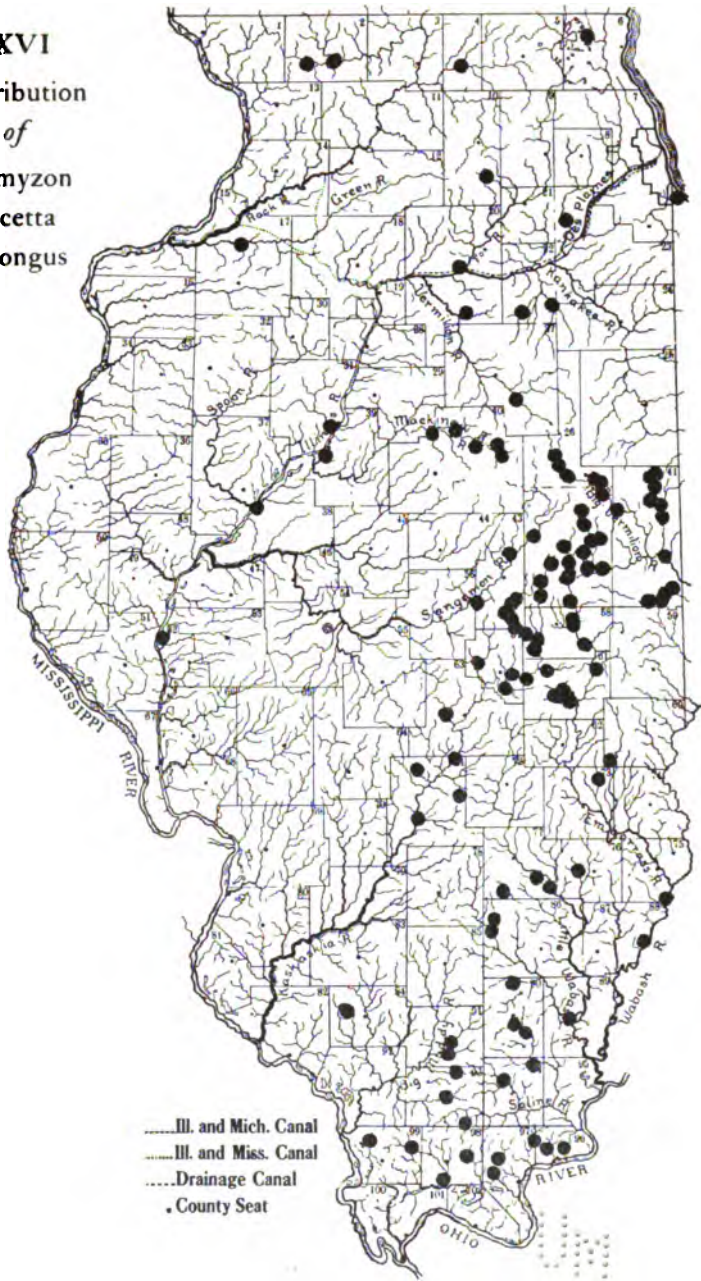
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XV  
 Distribution  
 of  
*Carpiodes  
 thompsoni*



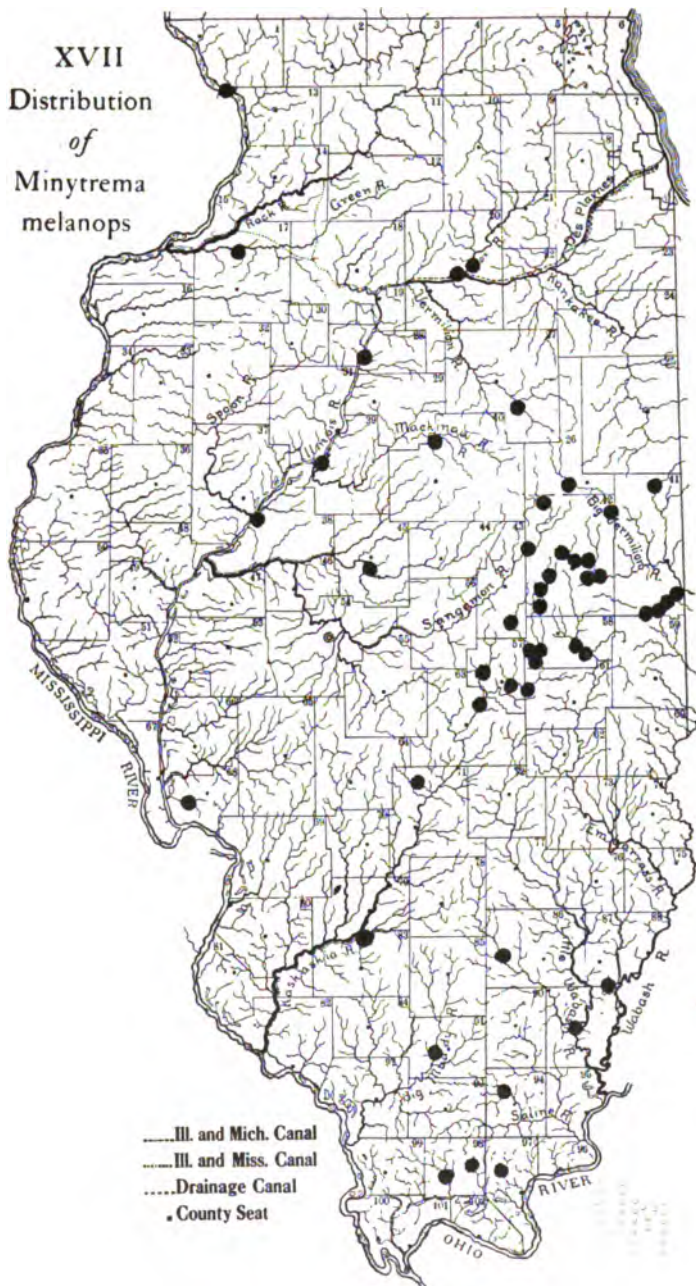
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**XVI**  
**Distribution**  
*of*  
**Erimyzon**  
*sucetta*  
**oblongus**



44

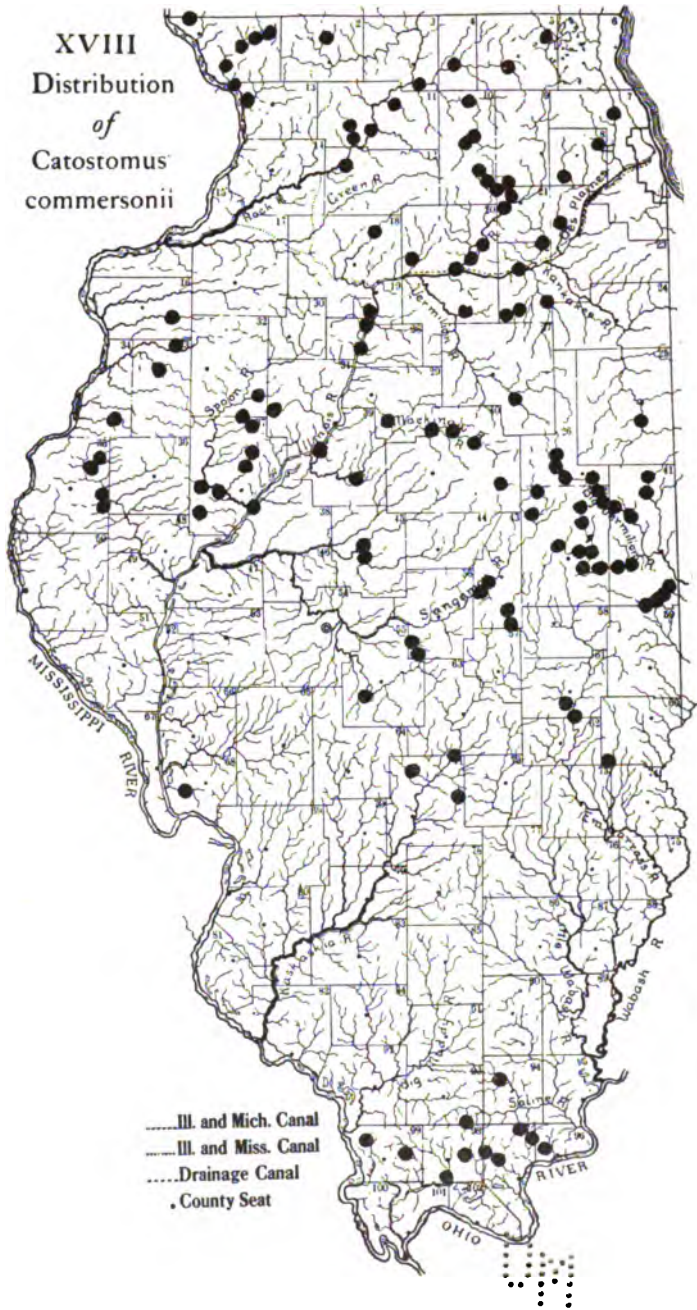
XVII  
 Distribution  
 of  
*Minytrema*  
*melanops*





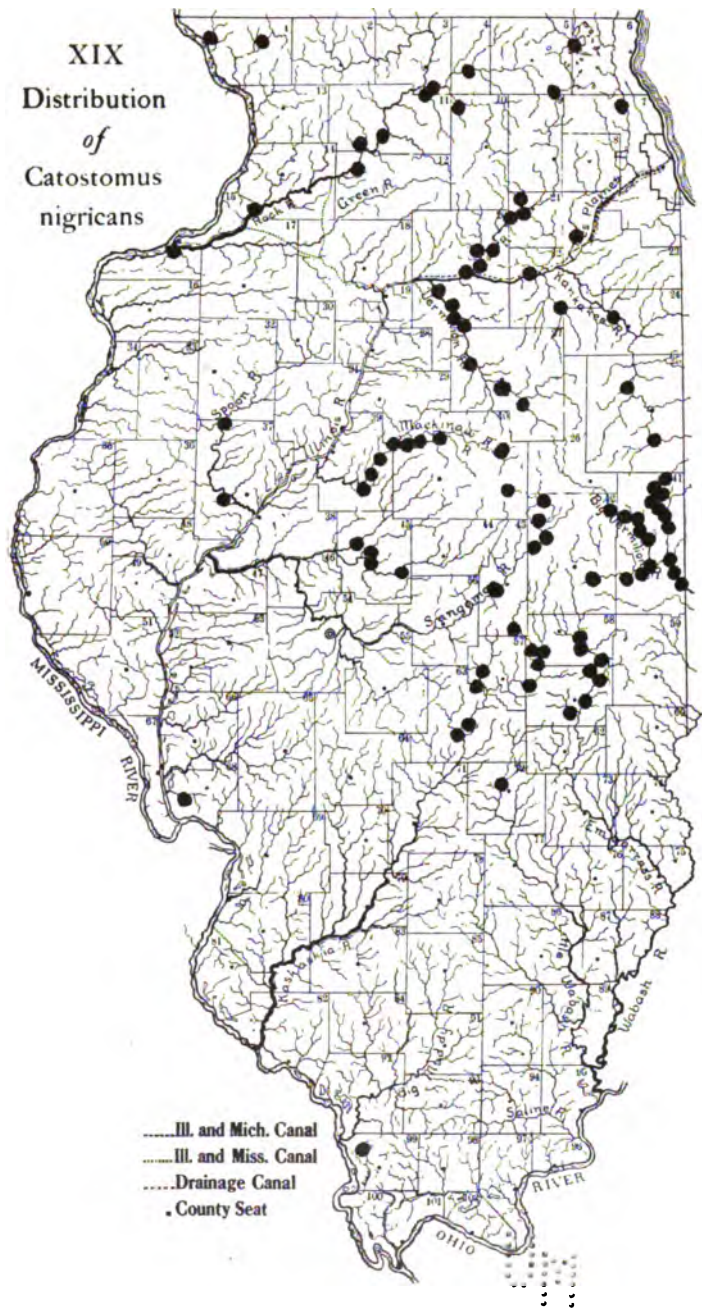
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XVIII  
 Distribution  
*of*  
*Catostomus*  
*commersonii*



44

XIX  
 Distribution  
 of  
*Catostomus*  
*nigricans*



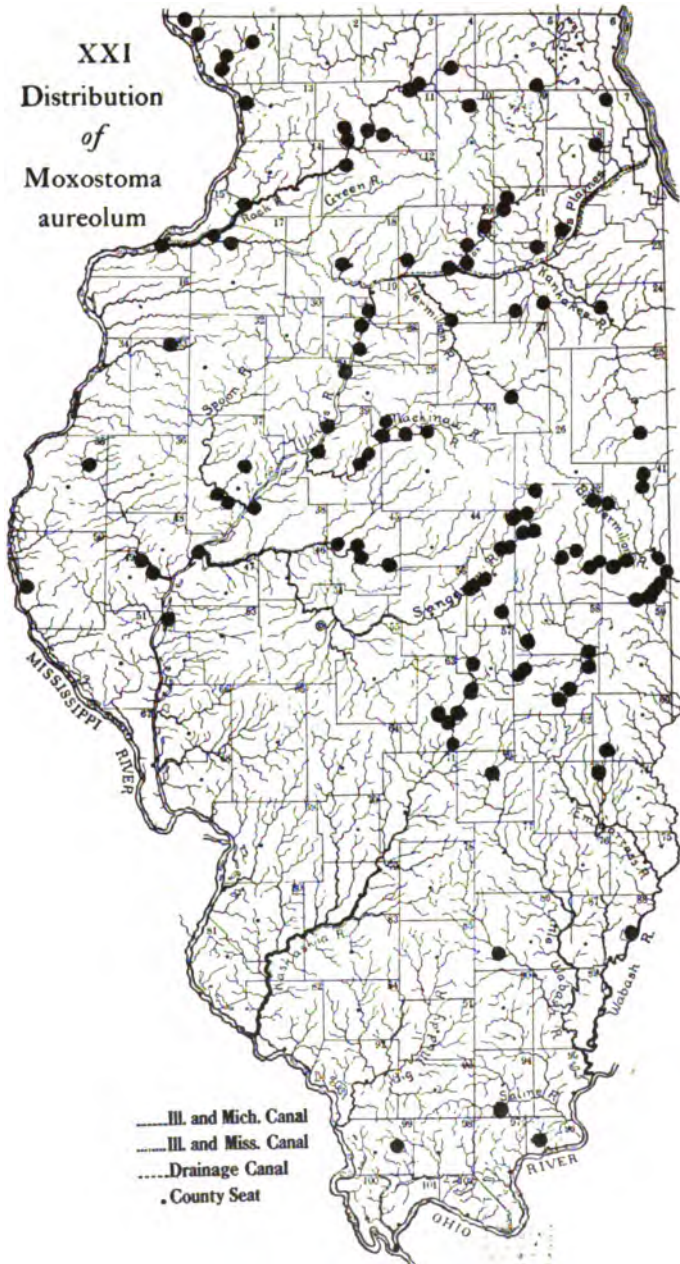
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XX  
 Distribution  
 of  
*Moxostoma*  
*anisurum*



10

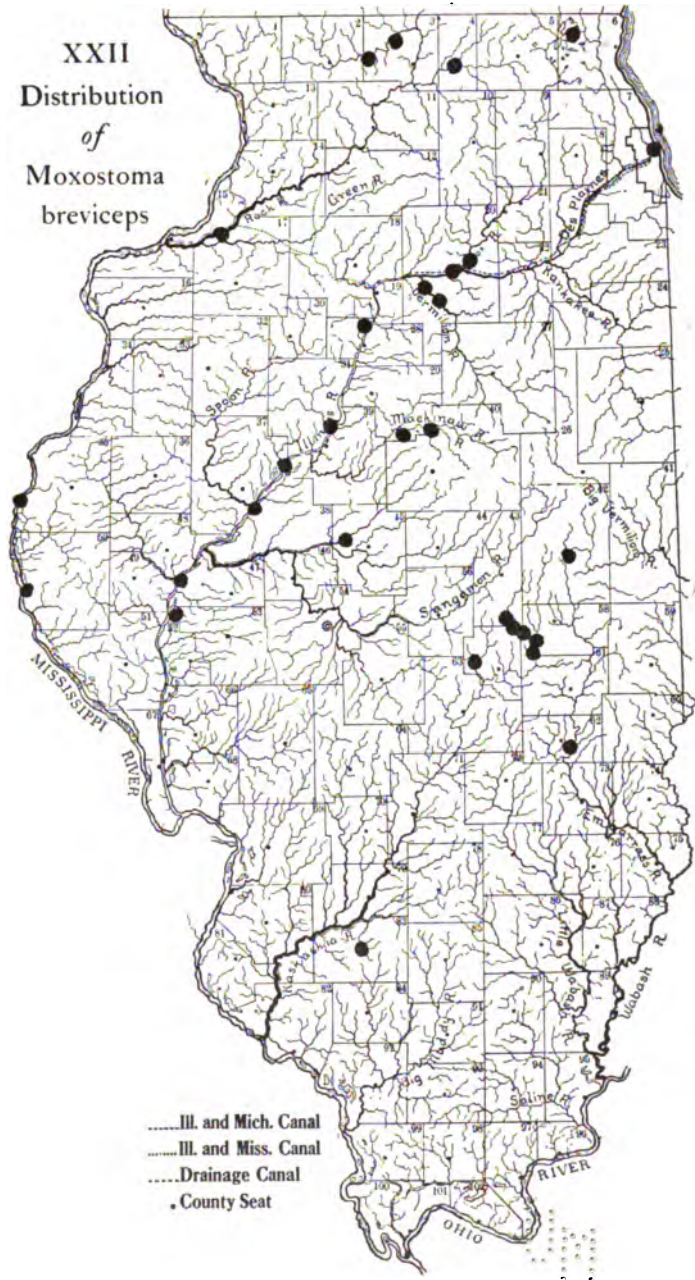
XXI  
 Distribution  
 of  
*Moxostoma*  
*aureolum*





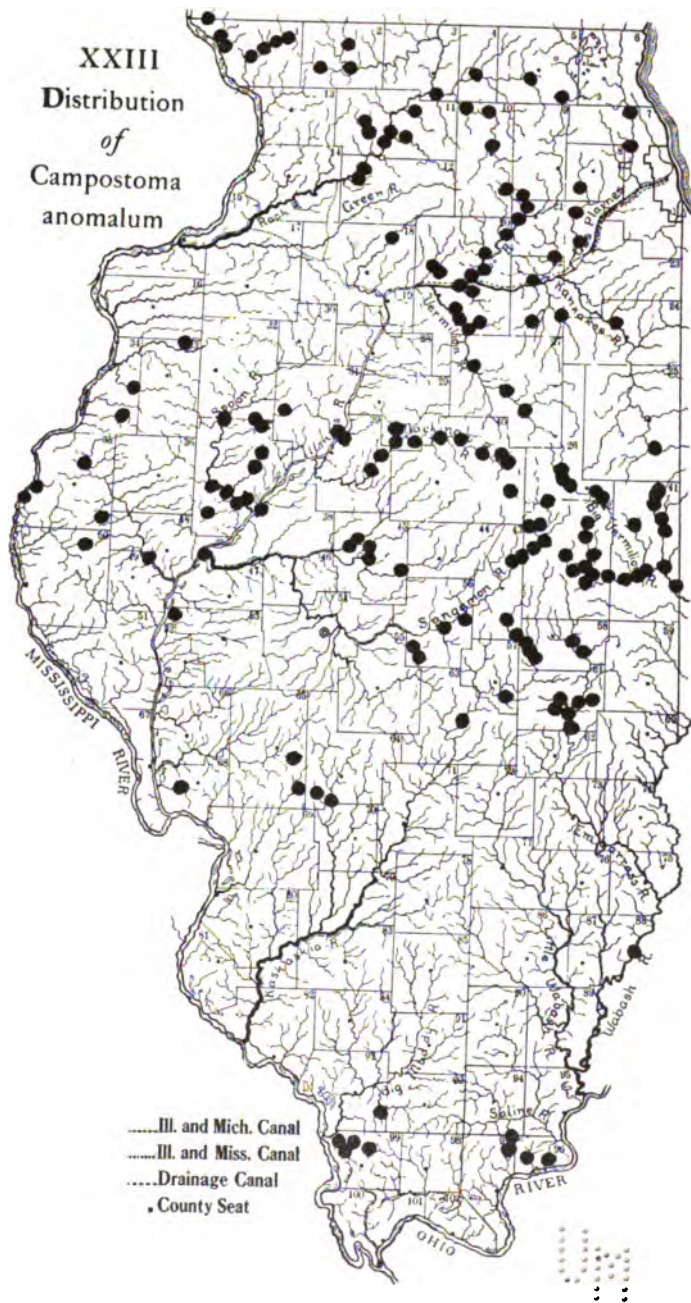
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XXII  
 Distribution  
 of  
*Moxostoma*  
*breviceps*



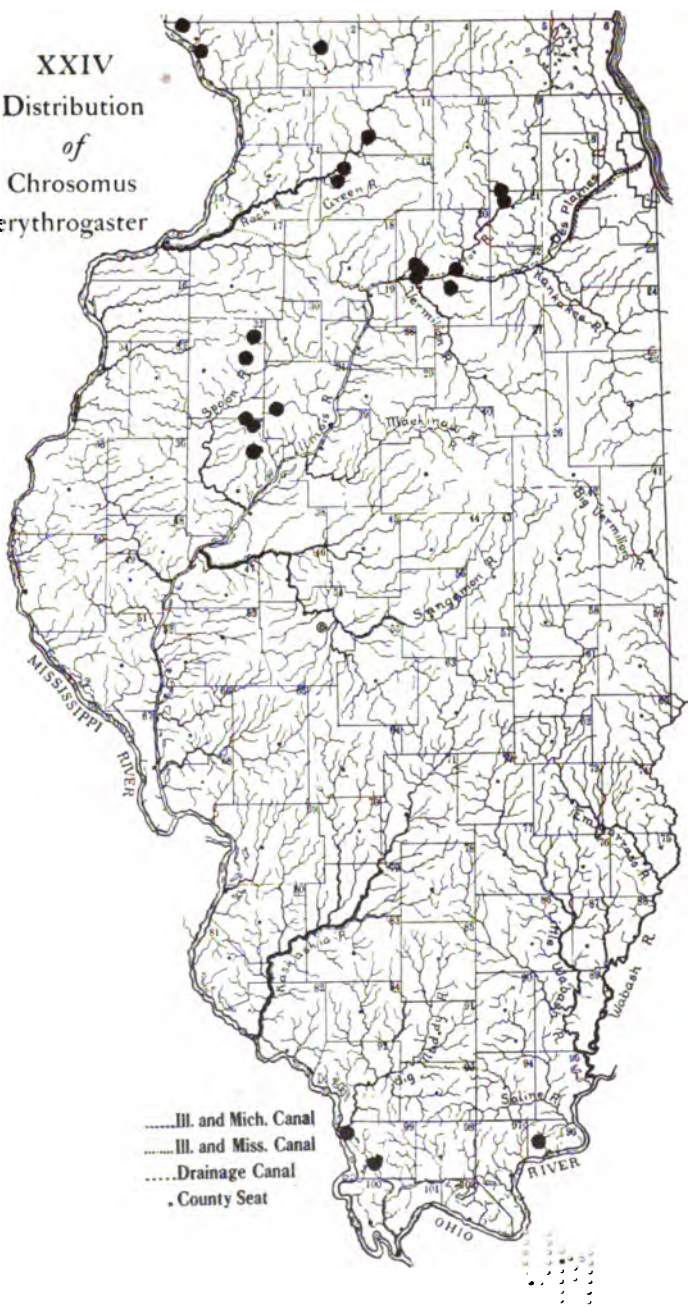
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XXIII  
 Distribution  
 of  
*Campostoma*  
*anomalum*



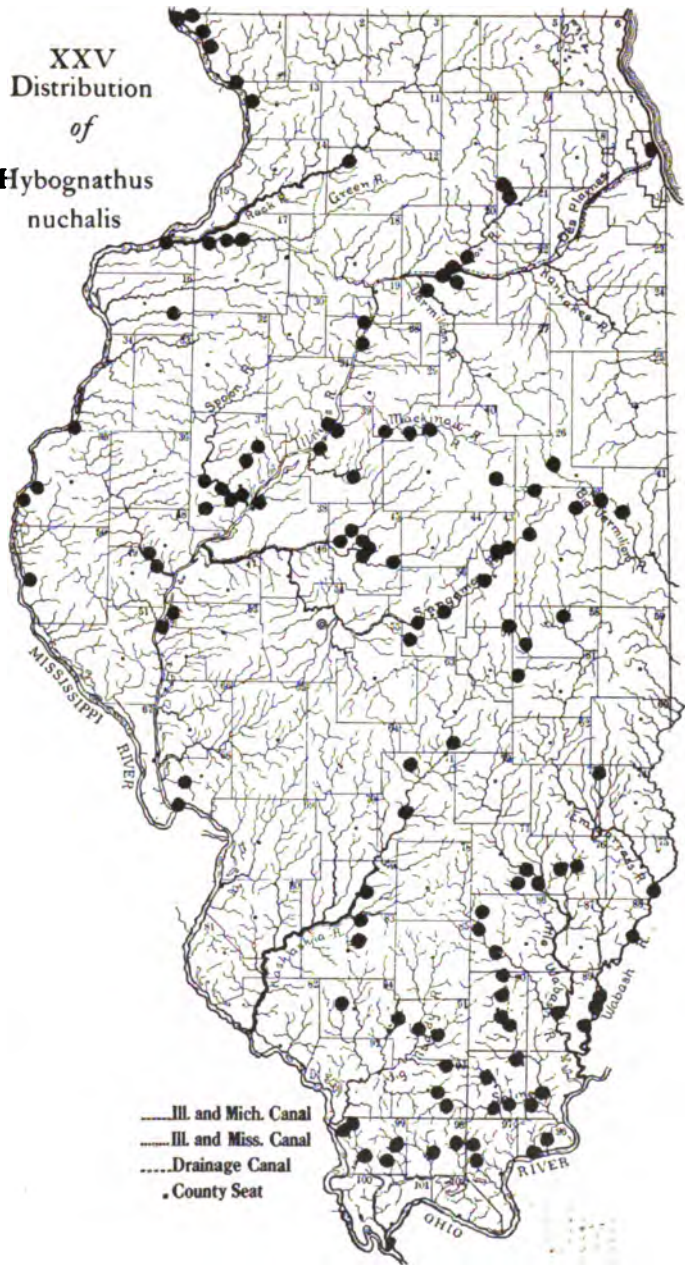
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XXIV  
 Distribution  
 of  
*Chrosomus*  
*erythrogaster*



44

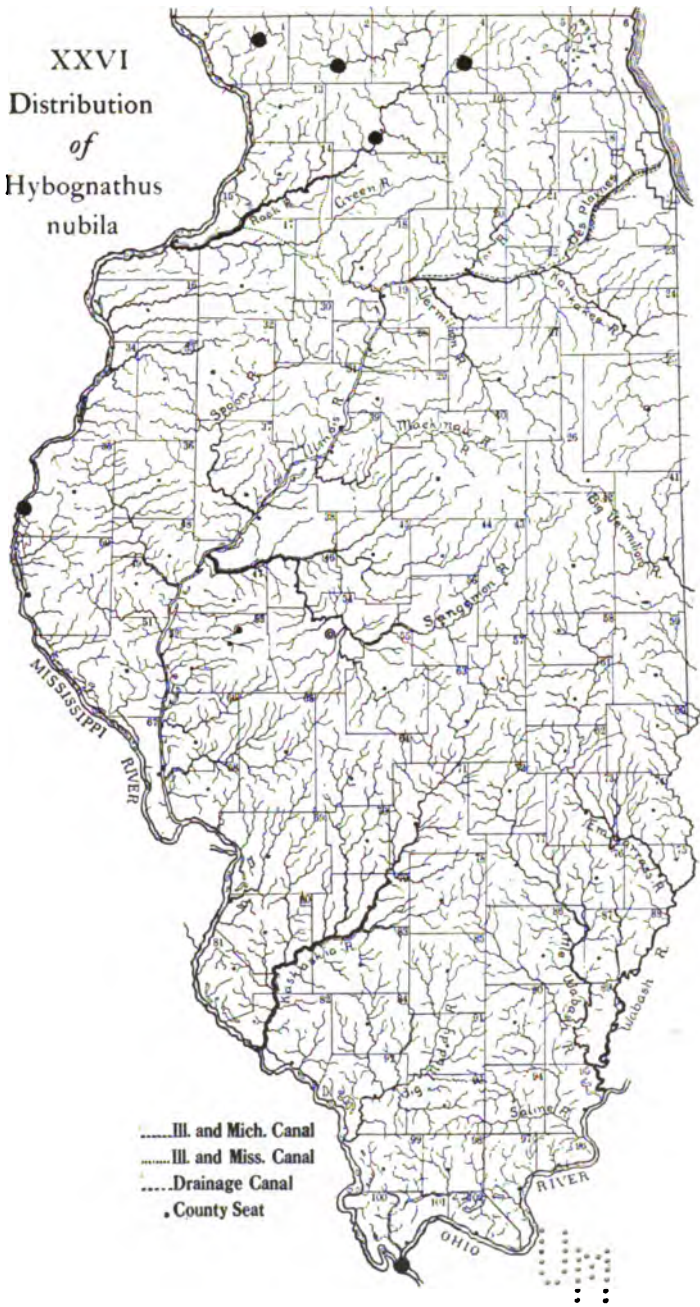
XXV  
 Distribution  
 of  
*Hybognathus  
 nuchalis*





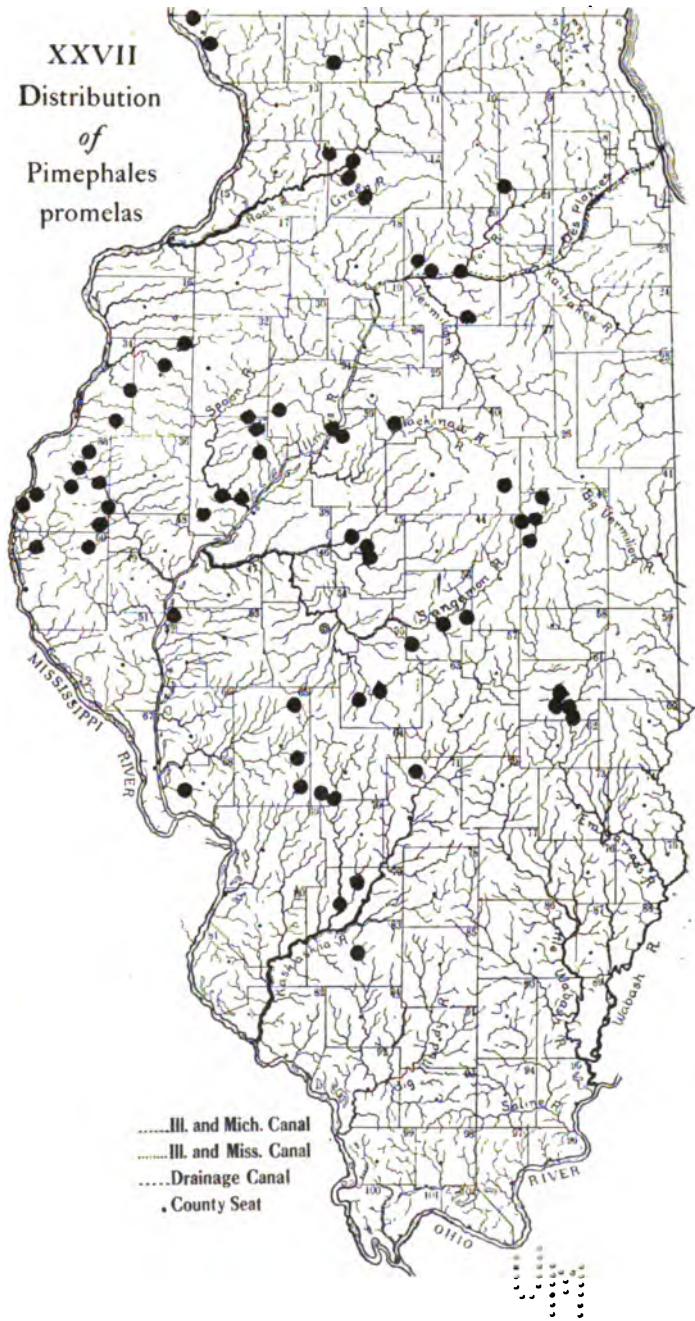
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XXVI  
 Distribution  
 of  
*Hybognathus*  
*nubila*



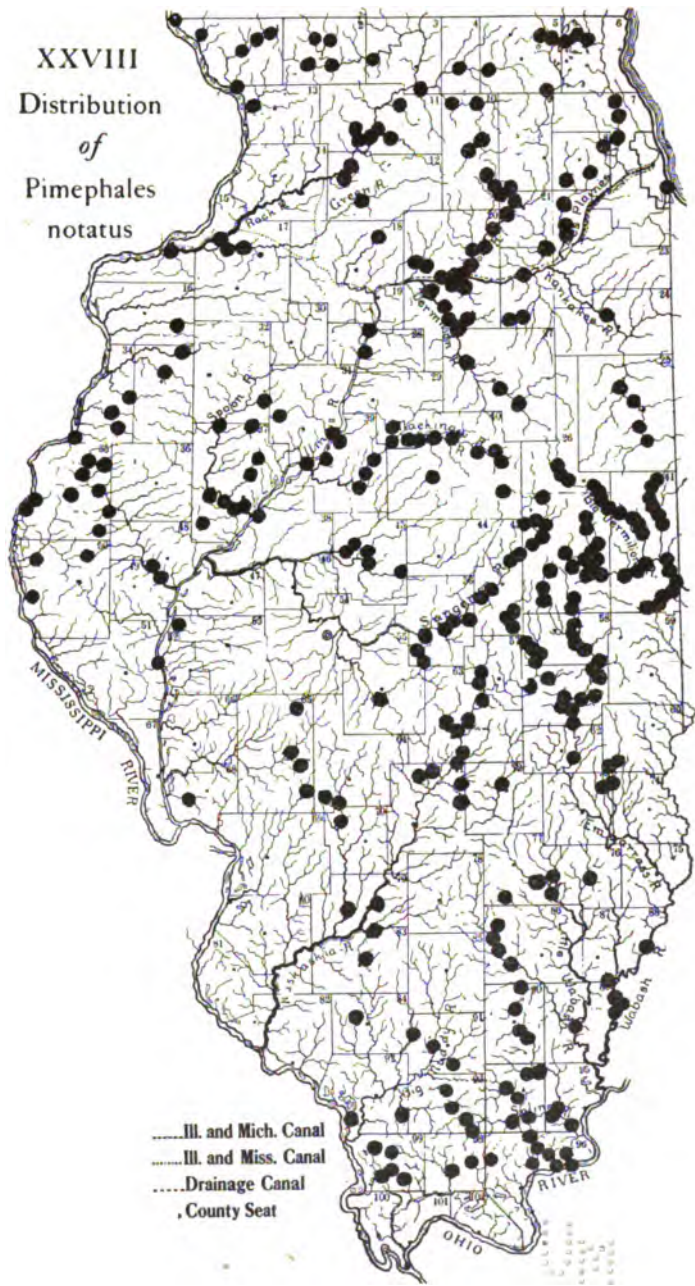
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XXVII  
 Distribution  
 of  
*Pimephales  
 promelas*



41

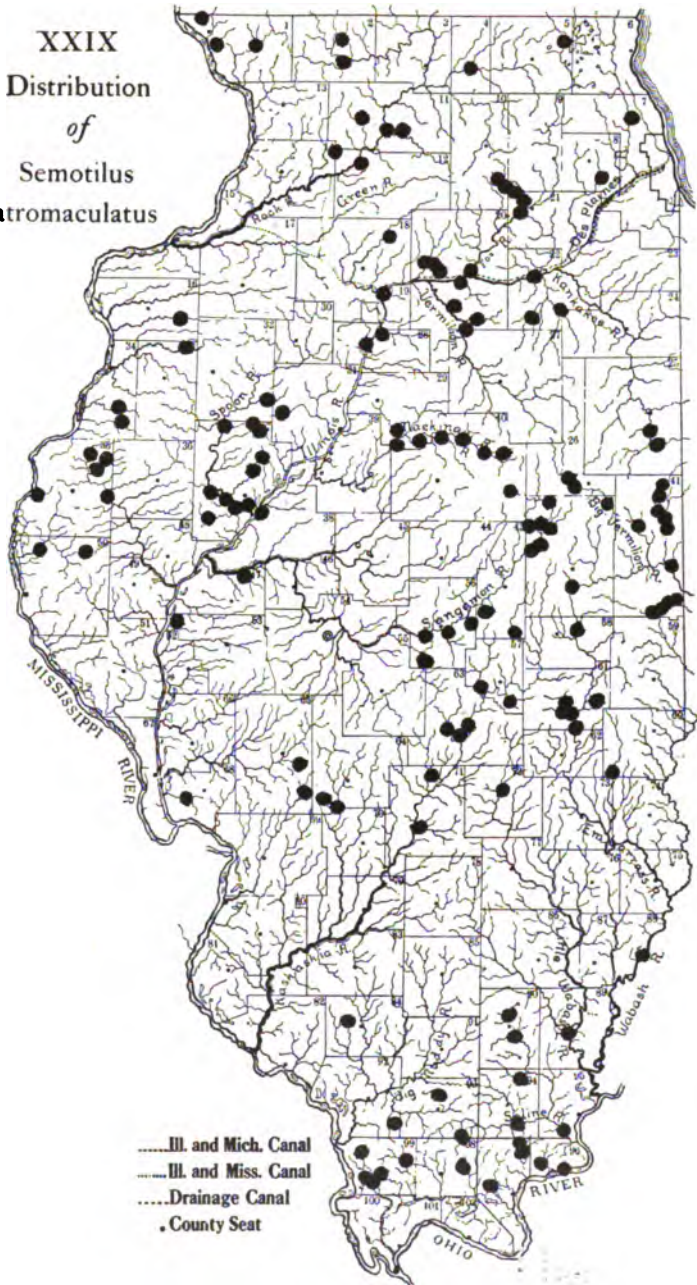
XXVIII  
 Distribution  
 of  
*Pimephales*  
*notatus*



.....Ill. and Mich. Canal  
 .....Ill. and Miss. Canal  
 .....Drainage Canal  
 , County Seat



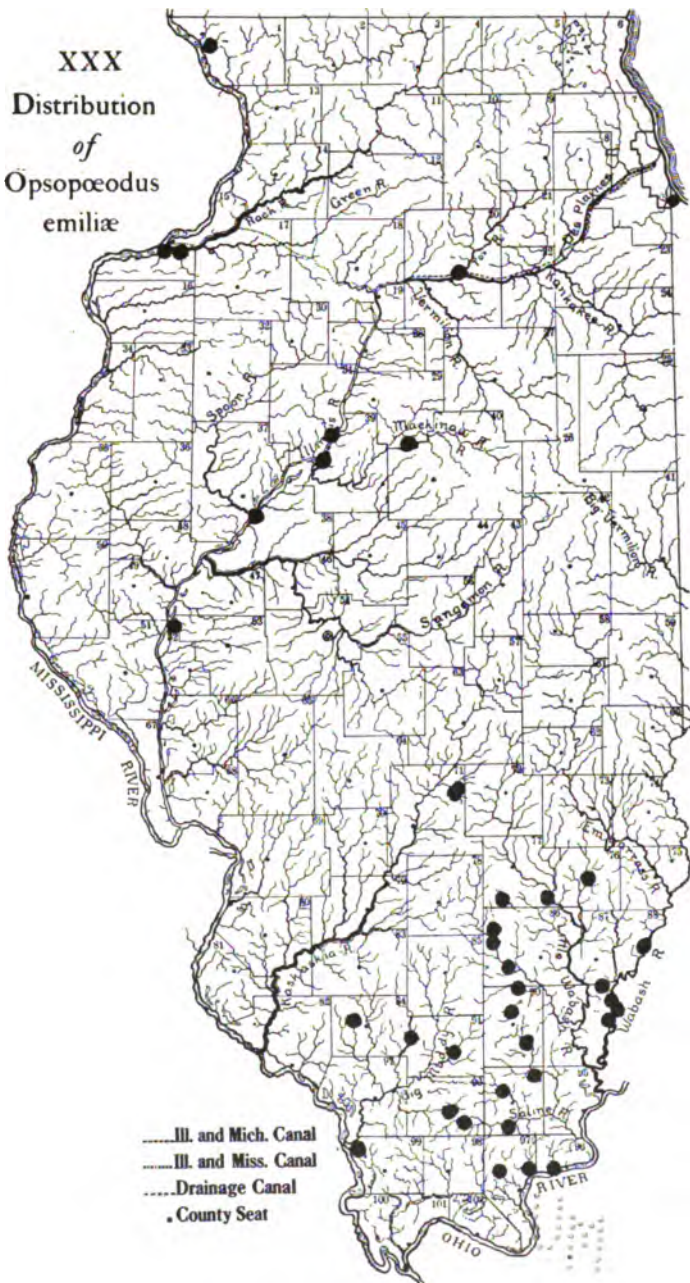
XXIX  
 Distribution  
 of  
*Semotilus*  
*atromaculatus*





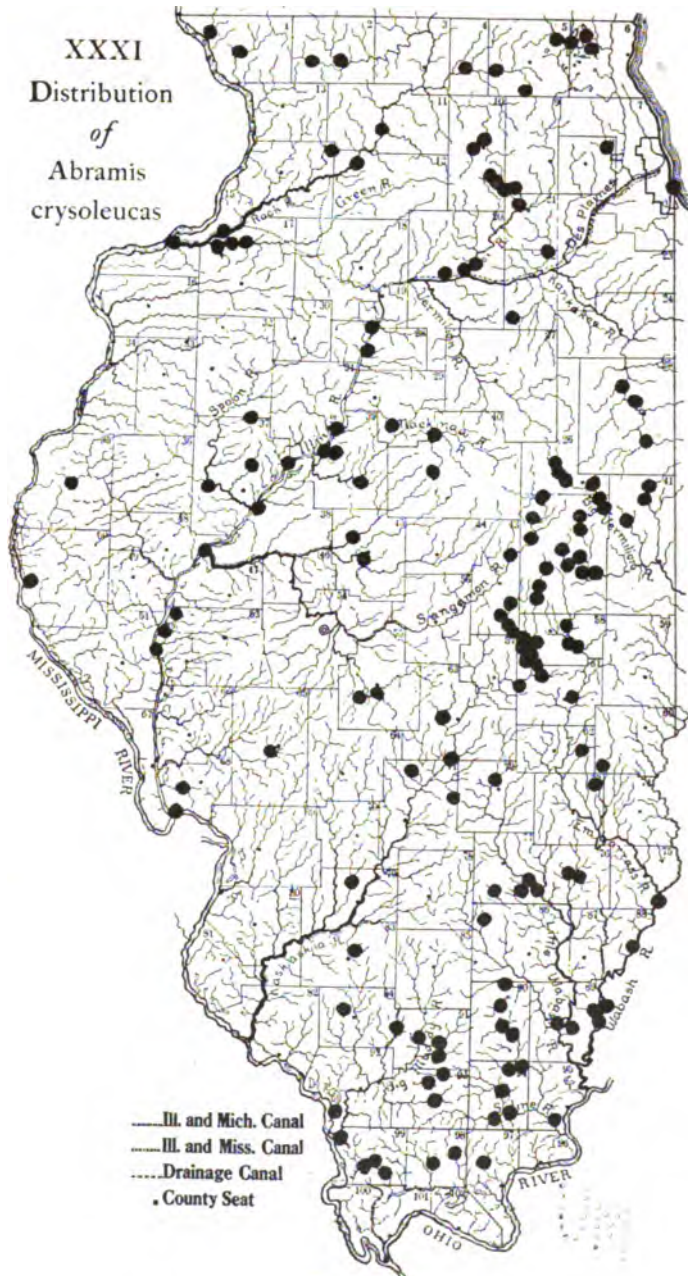
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XXX  
 Distribution  
 of  
*Opsopœodus*  
*emiliae*



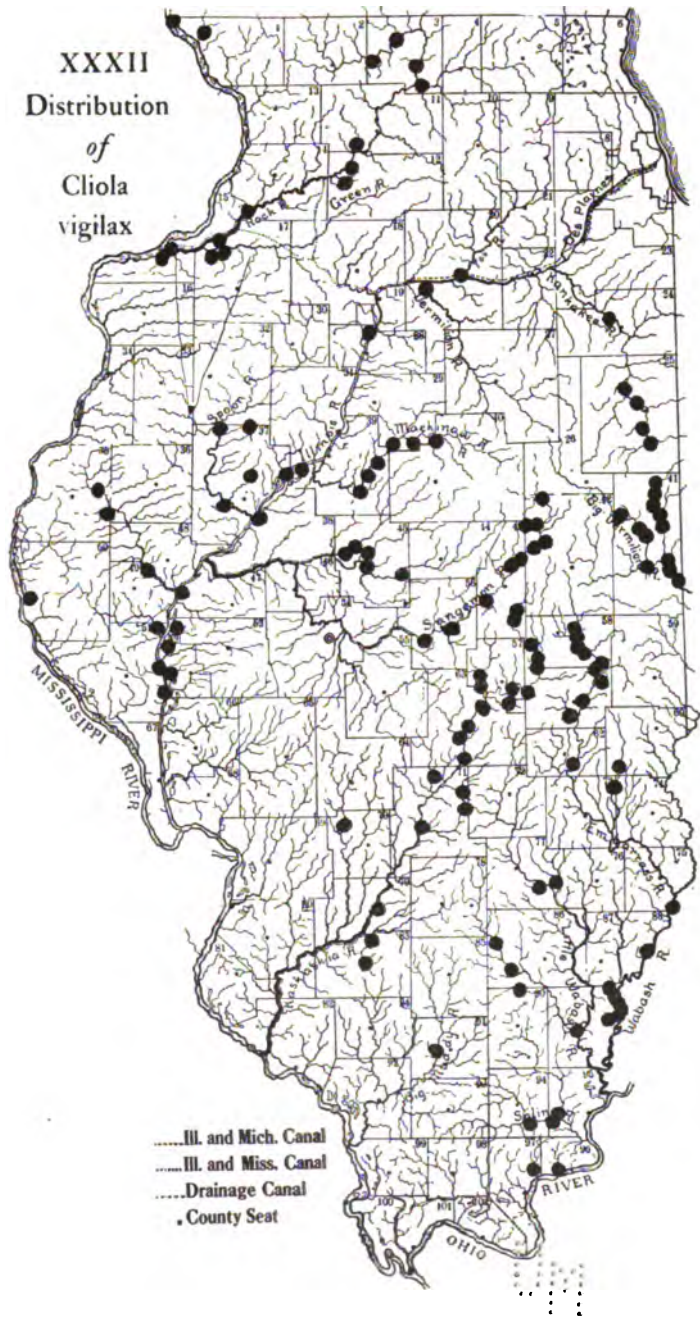
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XXXI  
 Distribution  
 of  
*Abramis*  
*crysoleucas*



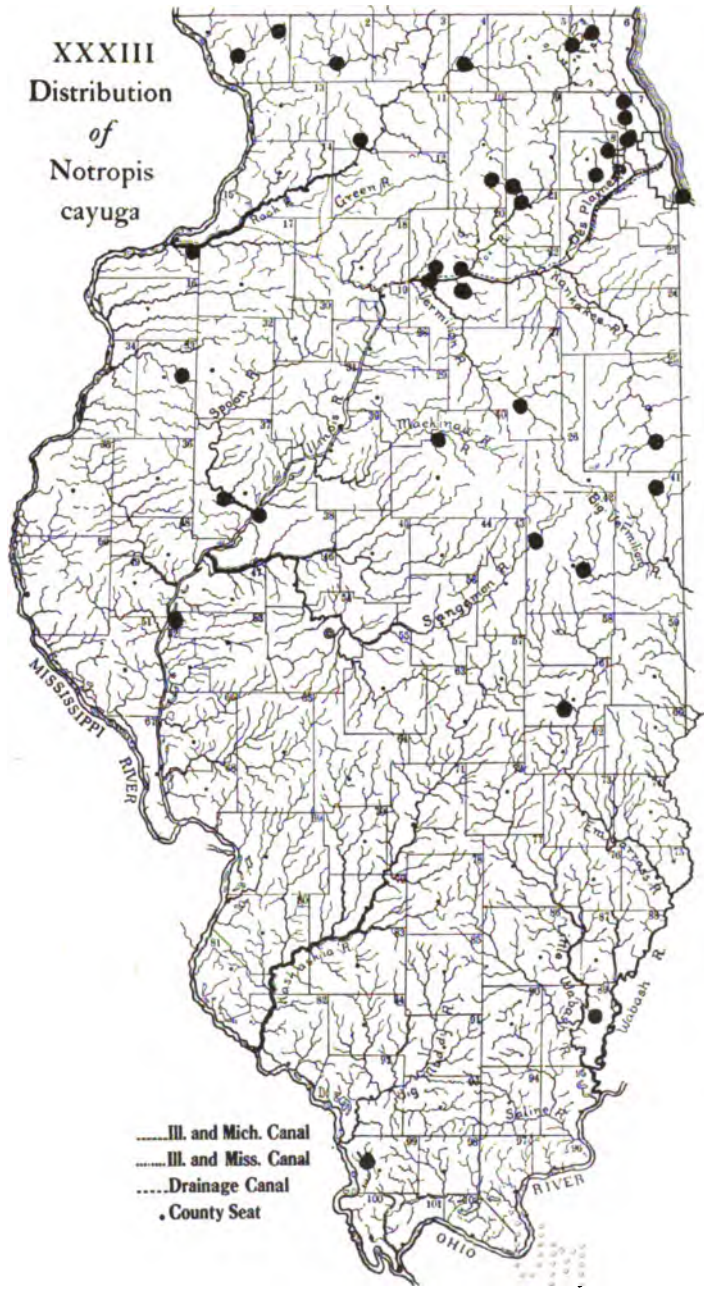
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XXXII  
 Distribution  
 of  
*Cliola*  
*vigilax*





XXXIII  
 Distribution  
 of  
*Notropis  
 cayuga*





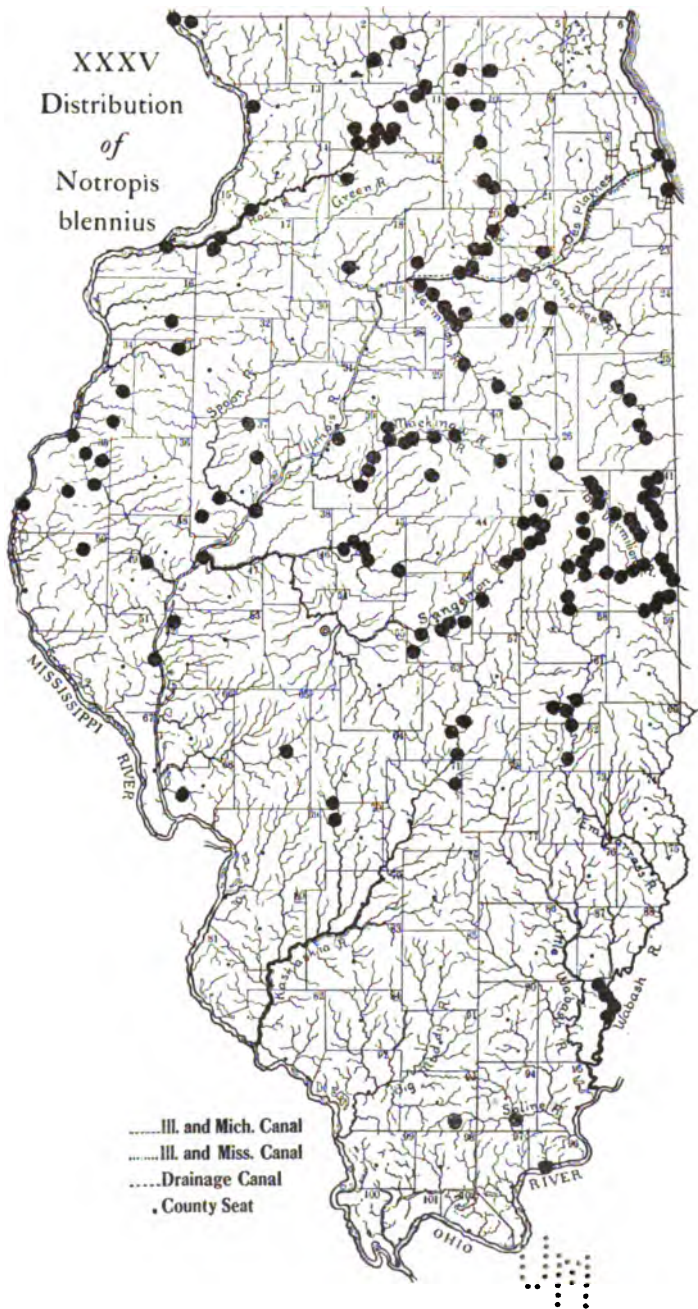
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XXXIV  
 Distribution  
 of  
*Notropis*  
*heterodon*



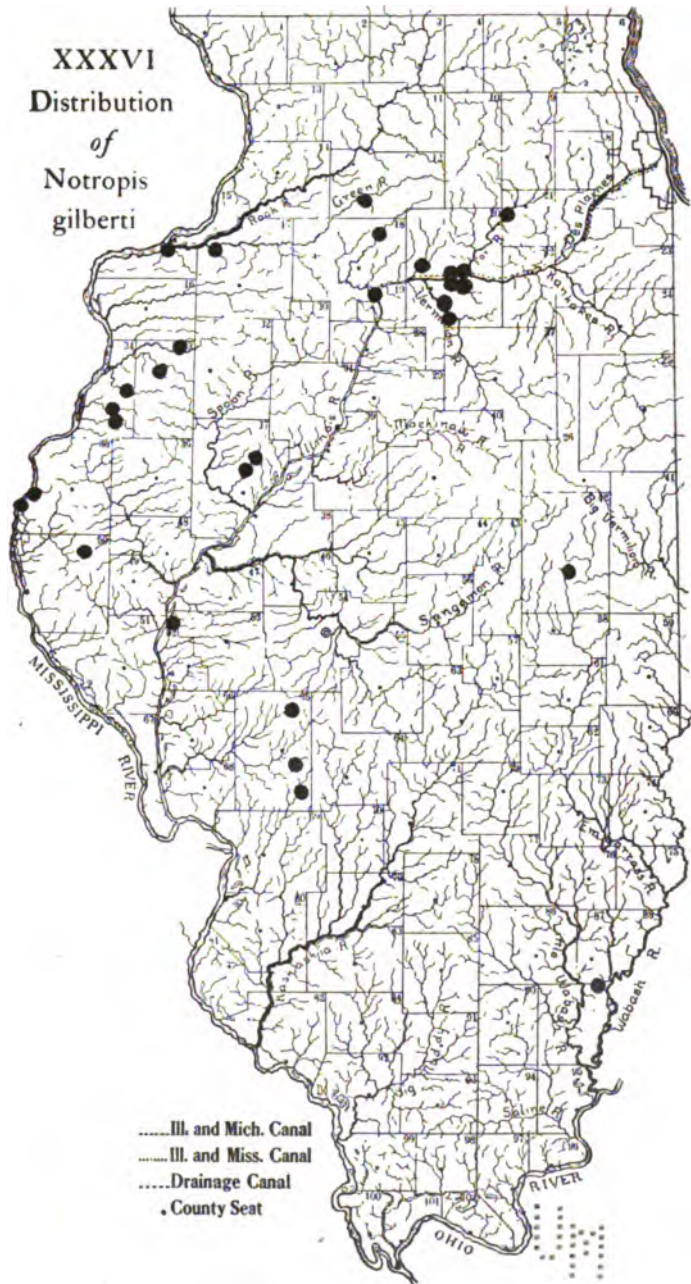
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XXXV  
 Distribution  
 of  
*Notropis  
 blennius*



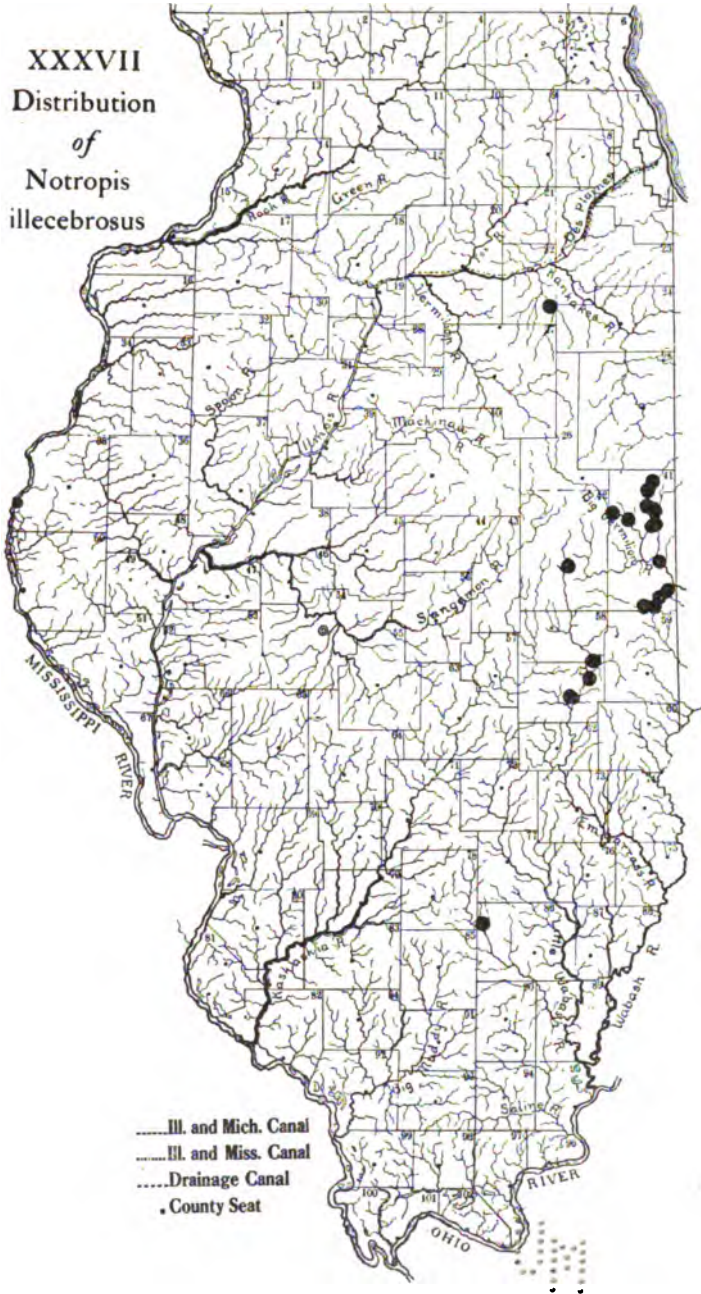
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XXXVI  
 Distribution  
 of  
*Notropis gilberti*



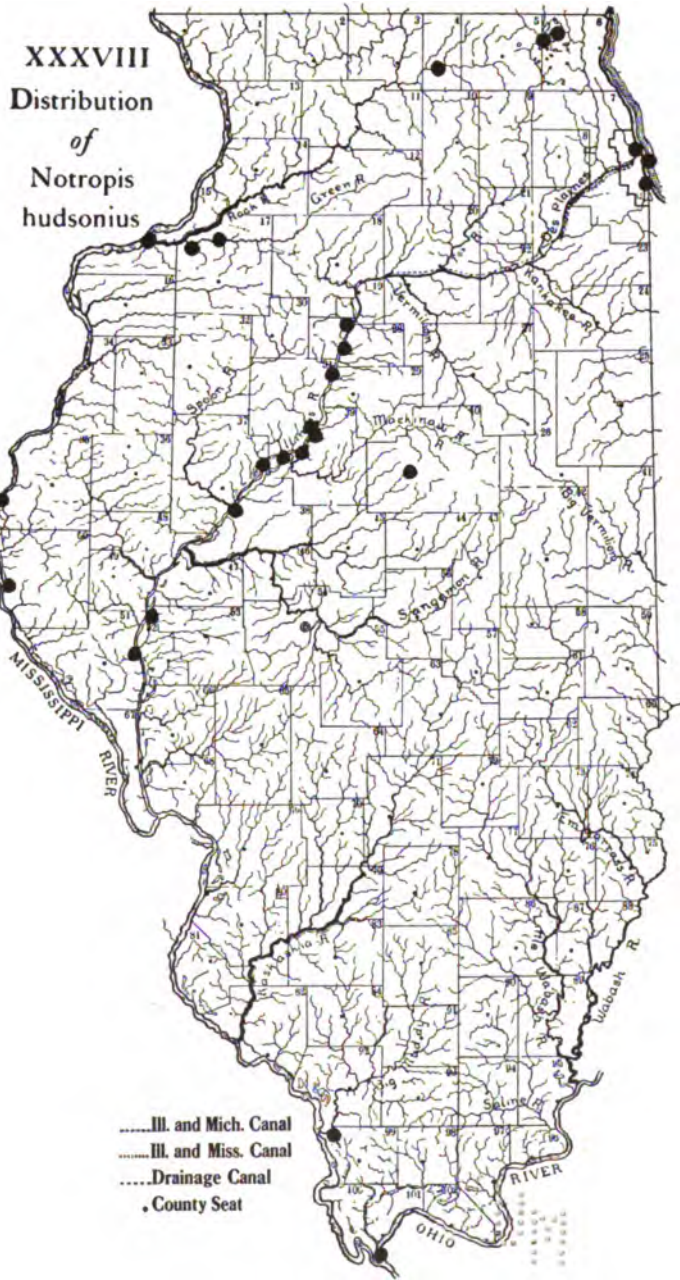
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XXXVII  
 Distribution  
 of  
*Notropis  
 illecebrosus*



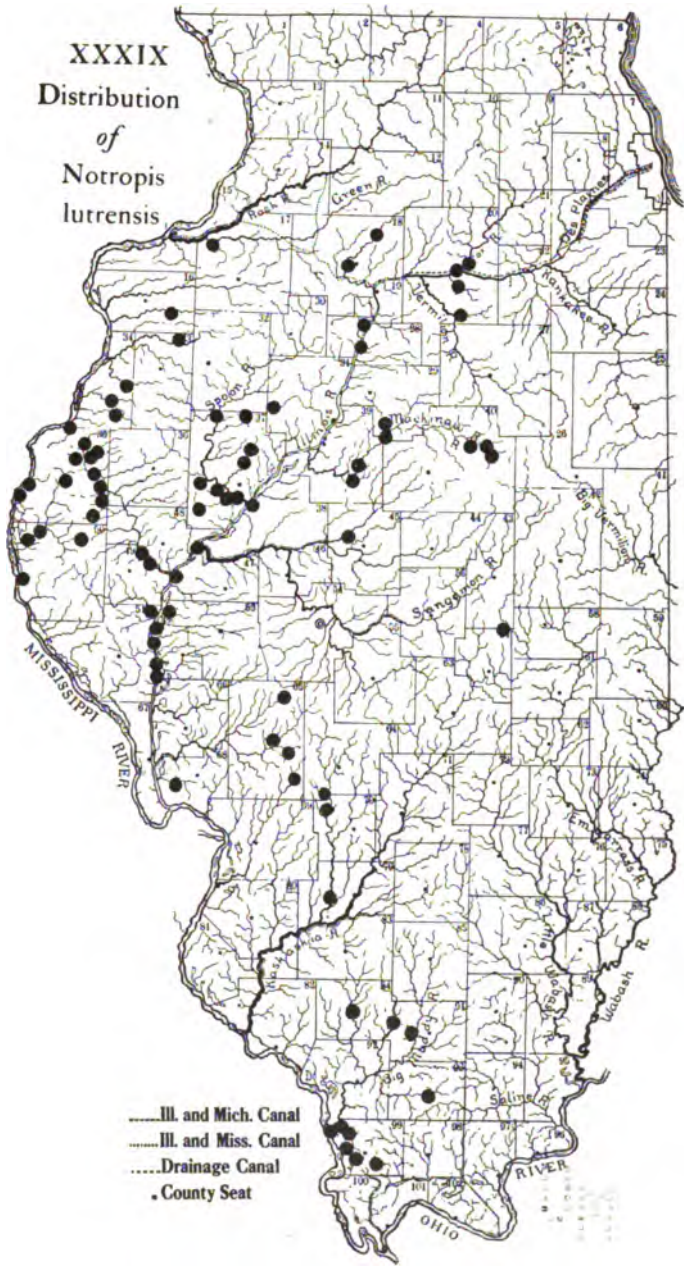


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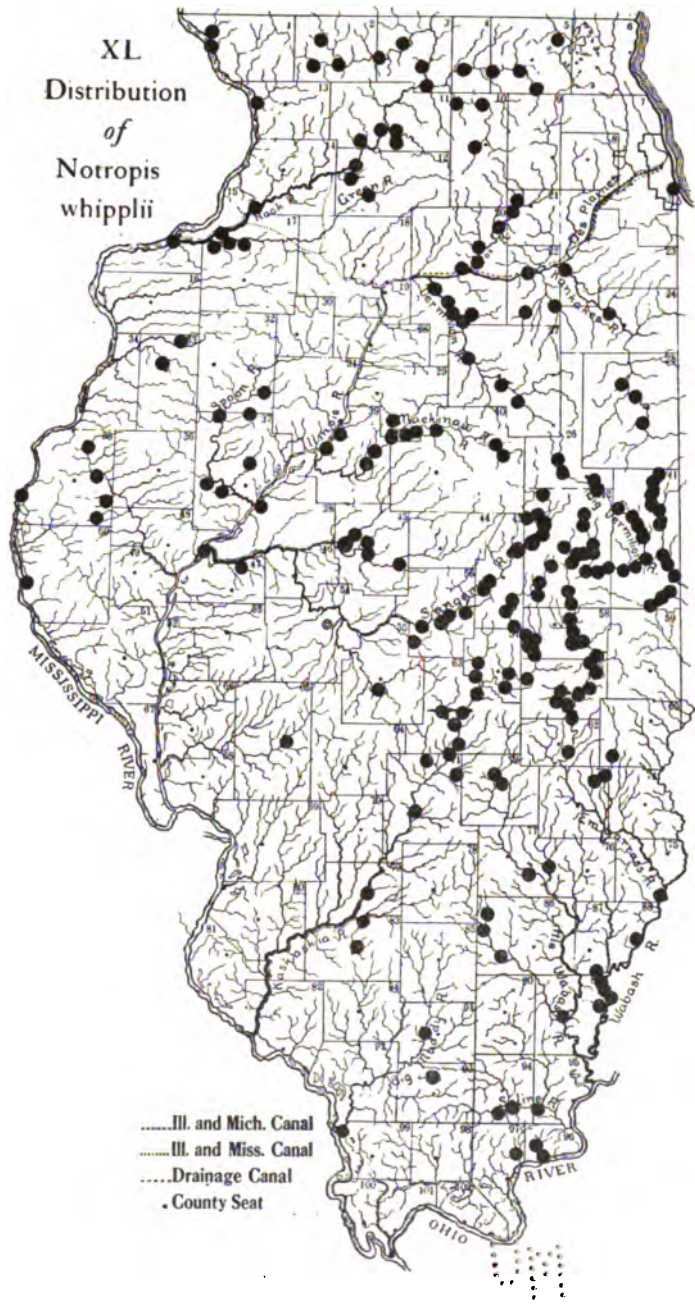
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XXXIX  
 Distribution  
 of  
*Notropis  
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 Distribution  
 of  
*Notropis  
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XLI  
 Distribution  
 of  
*Notropis  
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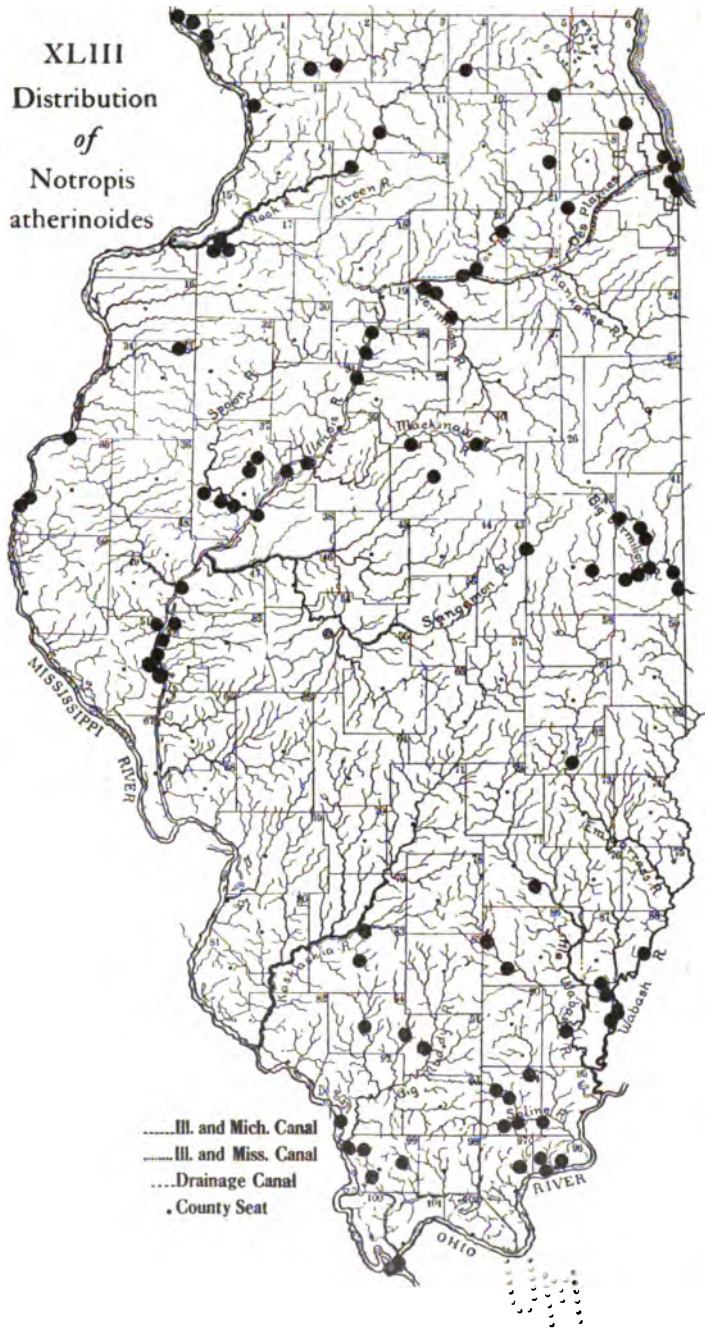
XLII  
 Distribution  
 of  
*Notropis  
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- .....Ill. and Mich. Canal
- Ill. and Miss. Canal
- .....Drainage Canal
- County Seat

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XLIII  
 Distribution  
 of  
*Notropis*  
*atherinoides*



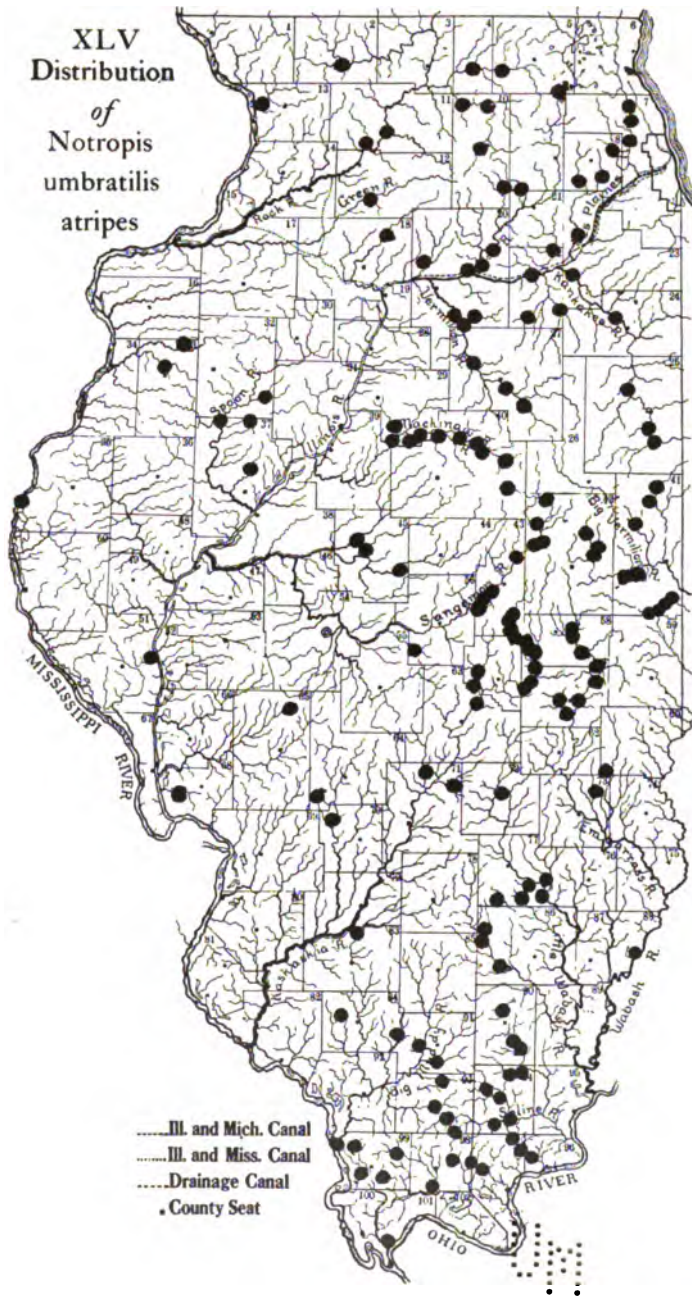
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XLIV  
 Distribution  
 of  
*Notropis  
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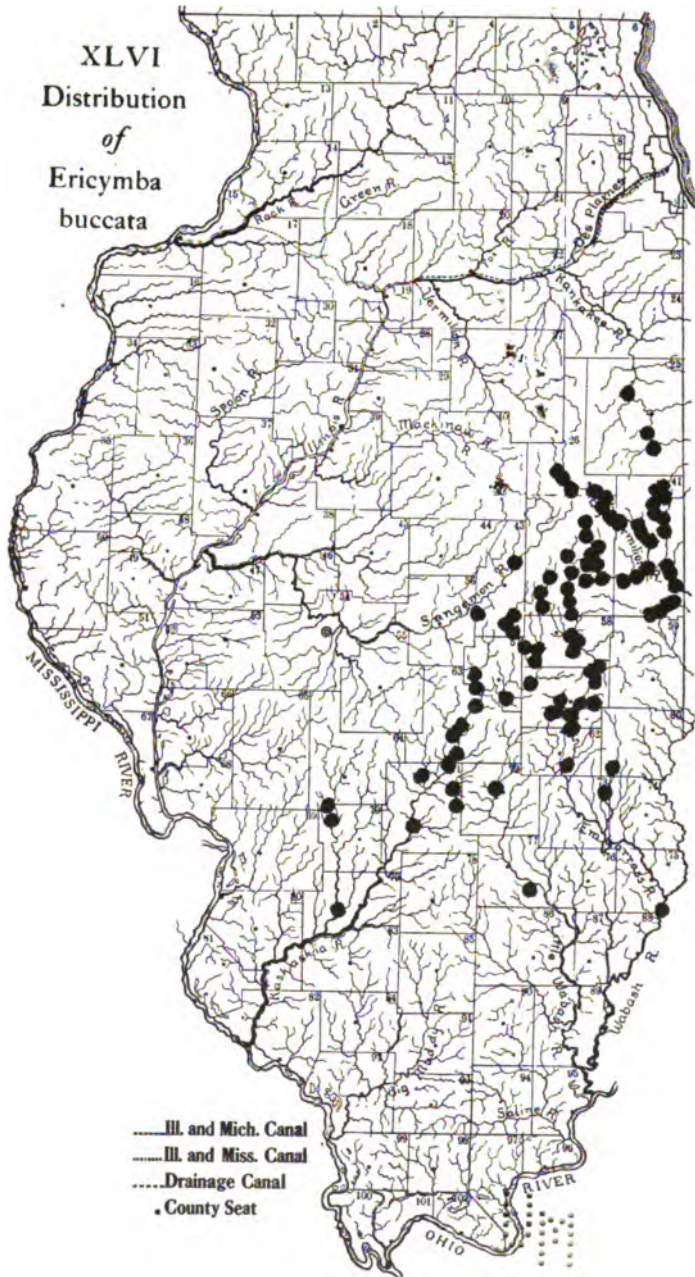
XLV  
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*Notropis  
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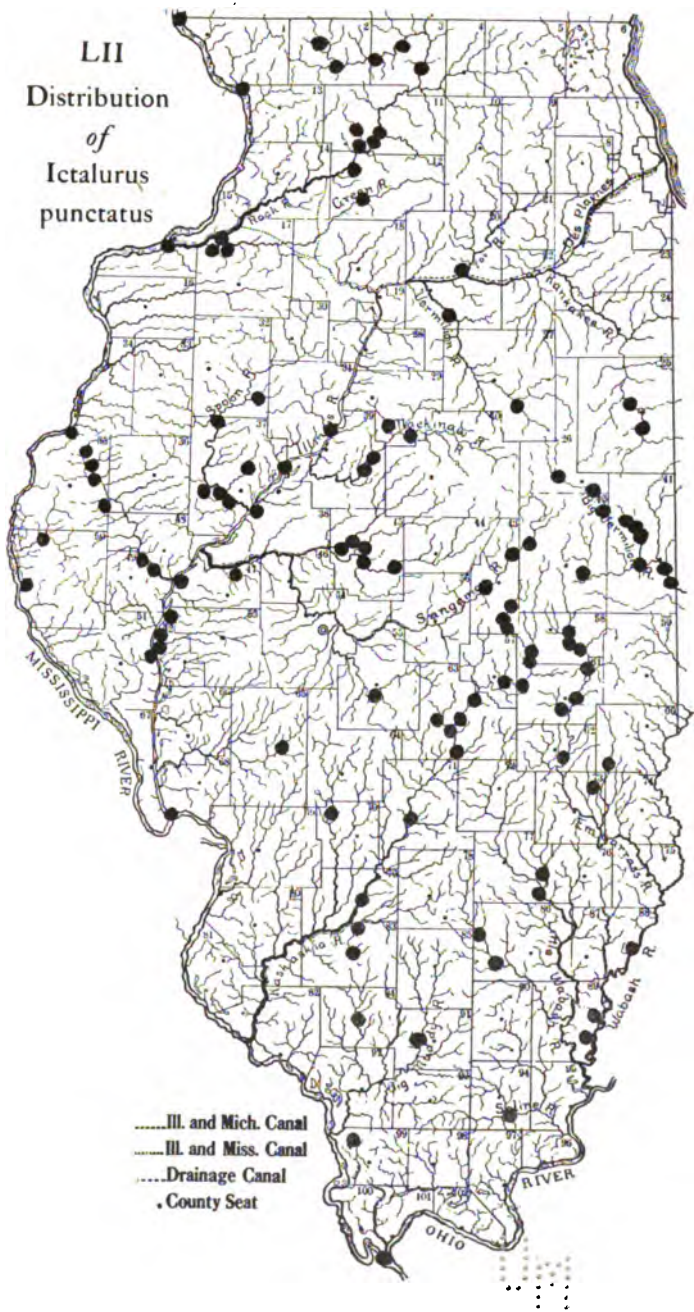
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XLVI  
 Distribution  
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*Ericymba*  
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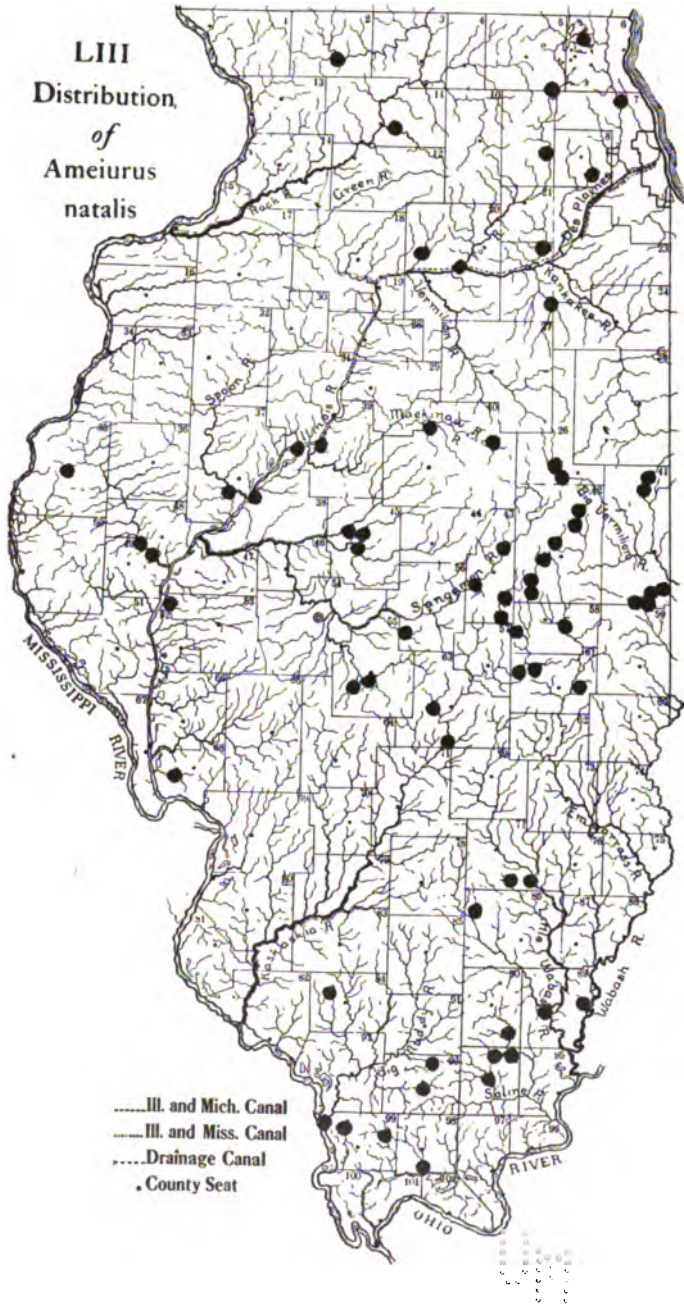
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LII  
 Distribution  
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*Ictalurus punctatus*



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LIII  
 Distribution  
 of  
*Ameiurus*  
*natalis*



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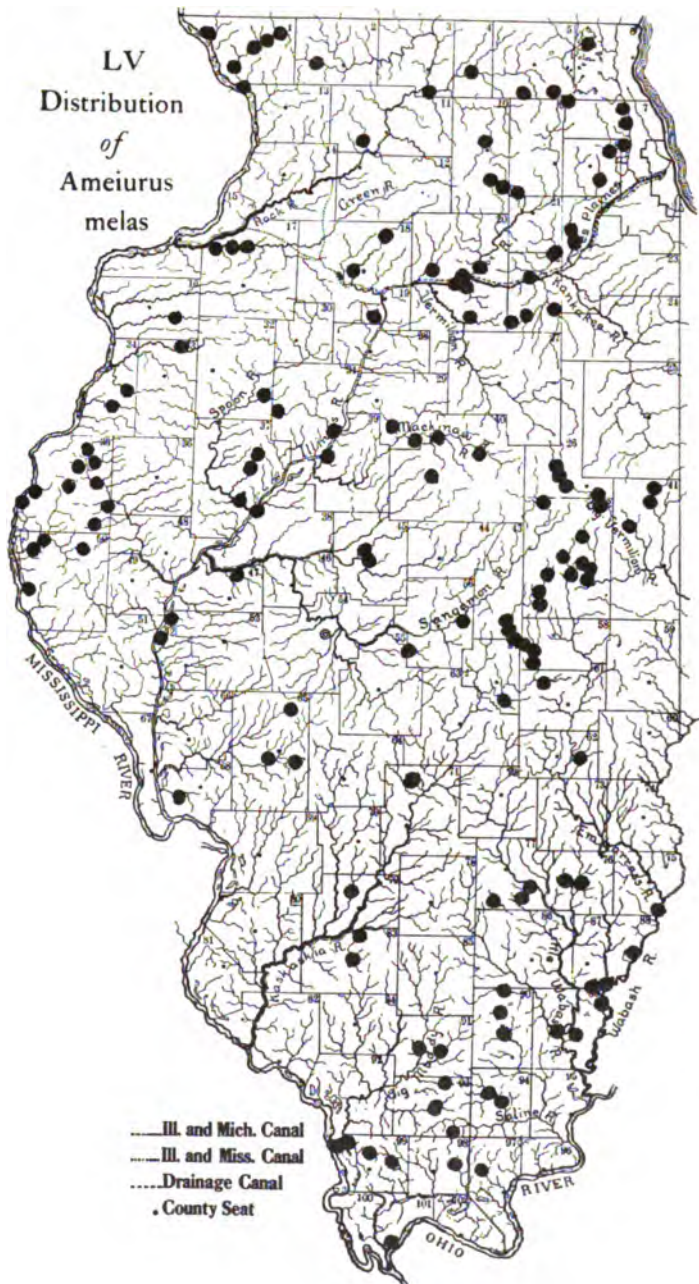
LIV  
 Distribution  
 of  
*Ameiurus  
 nebulosus*

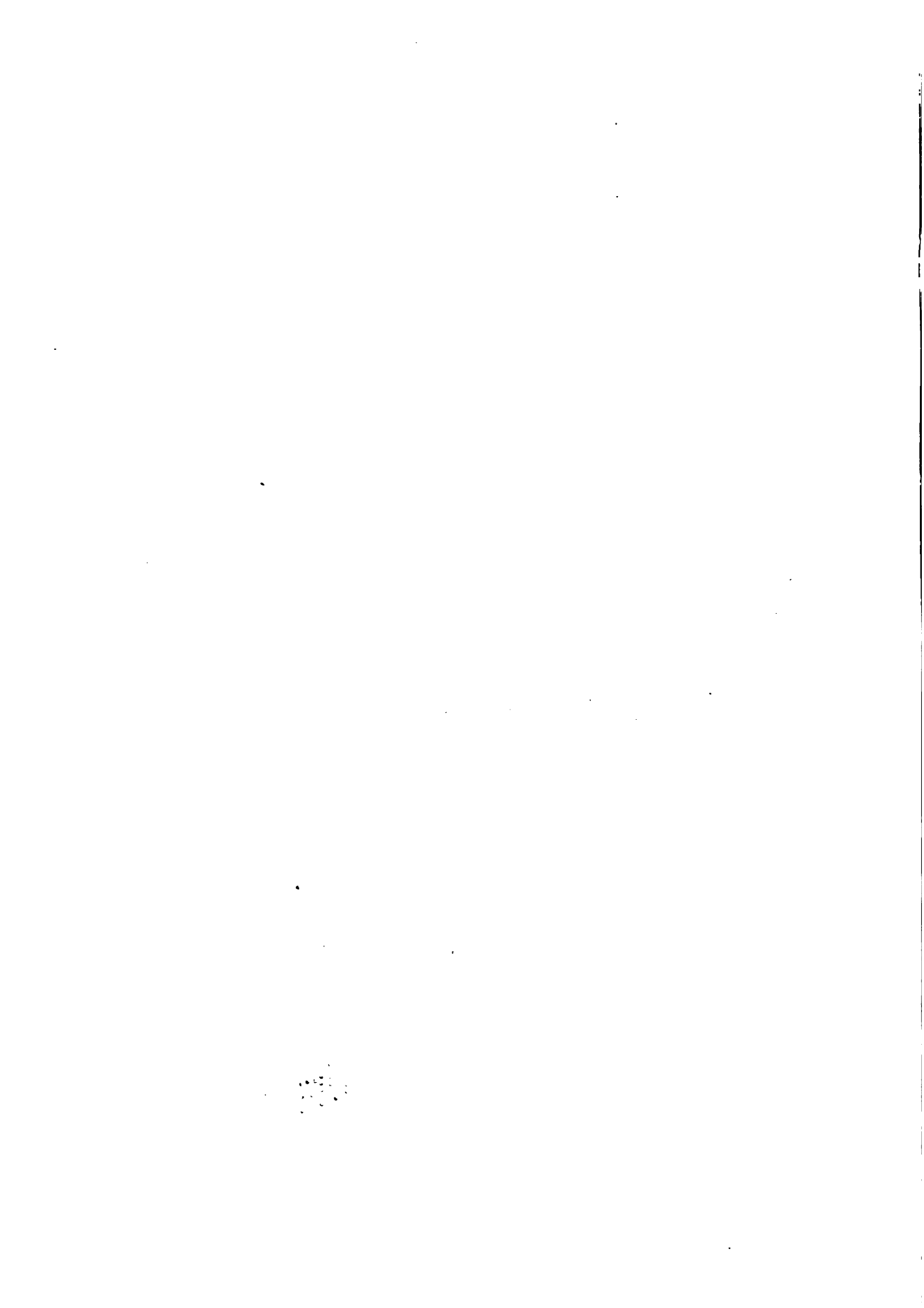




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LV  
 Distribution  
 of  
*Ameiurus  
 melas*



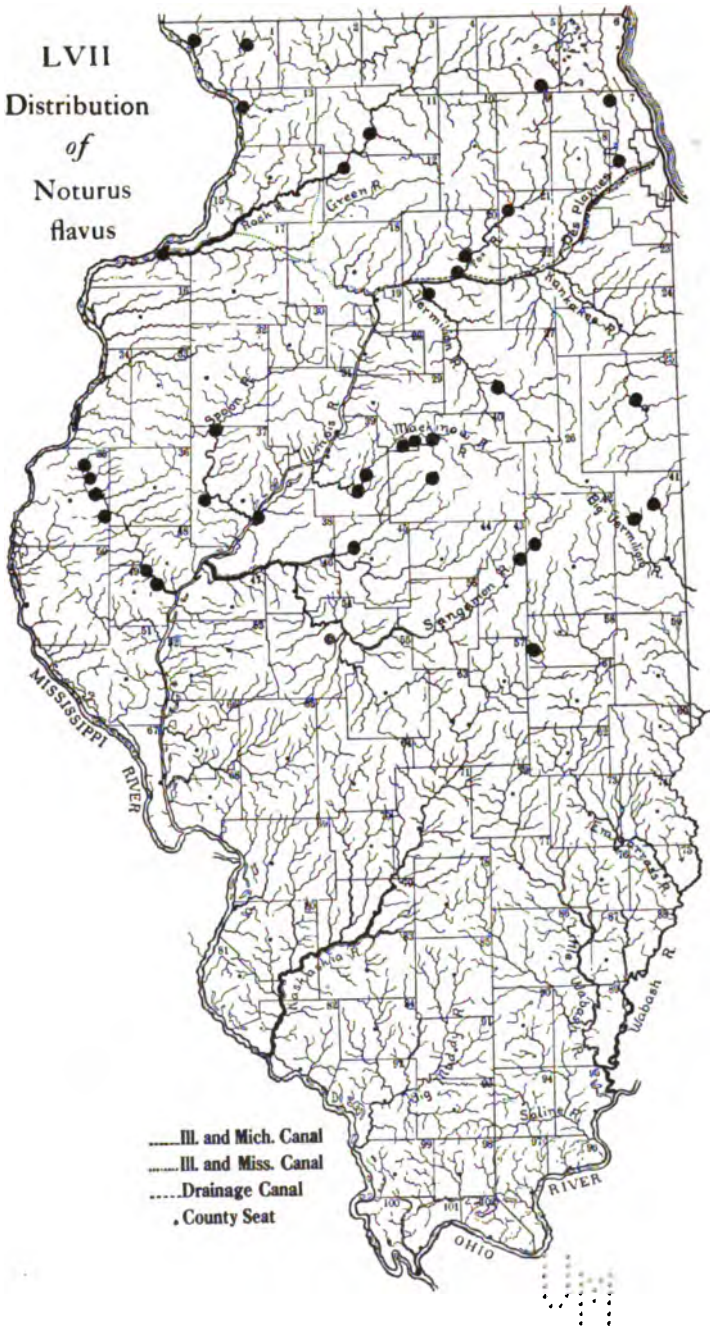


LVI  
 Distribution  
 of  
*Leptops  
 olivaris*



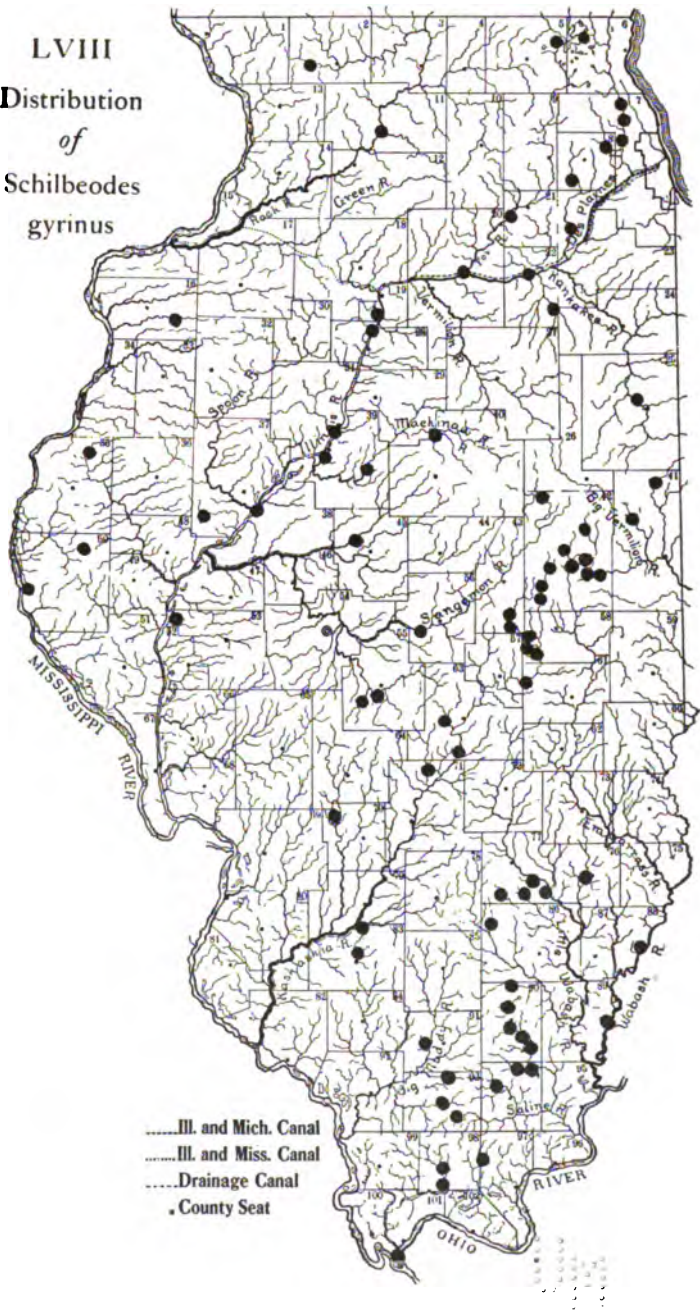


LVII  
 Distribution  
 of  
*Noturus*  
*flavus*



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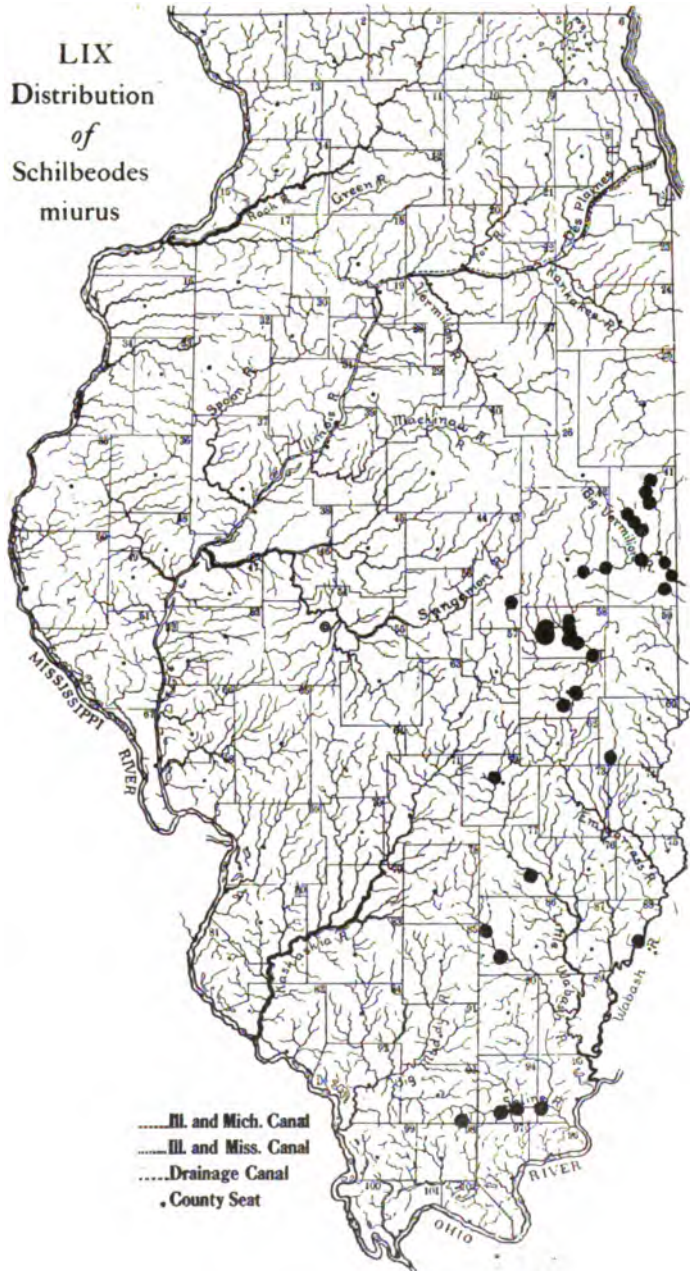
LVIII  
 Distribution  
 of  
*Schilbeodes*  
*gyrinus*





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LIX  
 Distribution  
 of  
*Schilbeodes*  
*miurus*

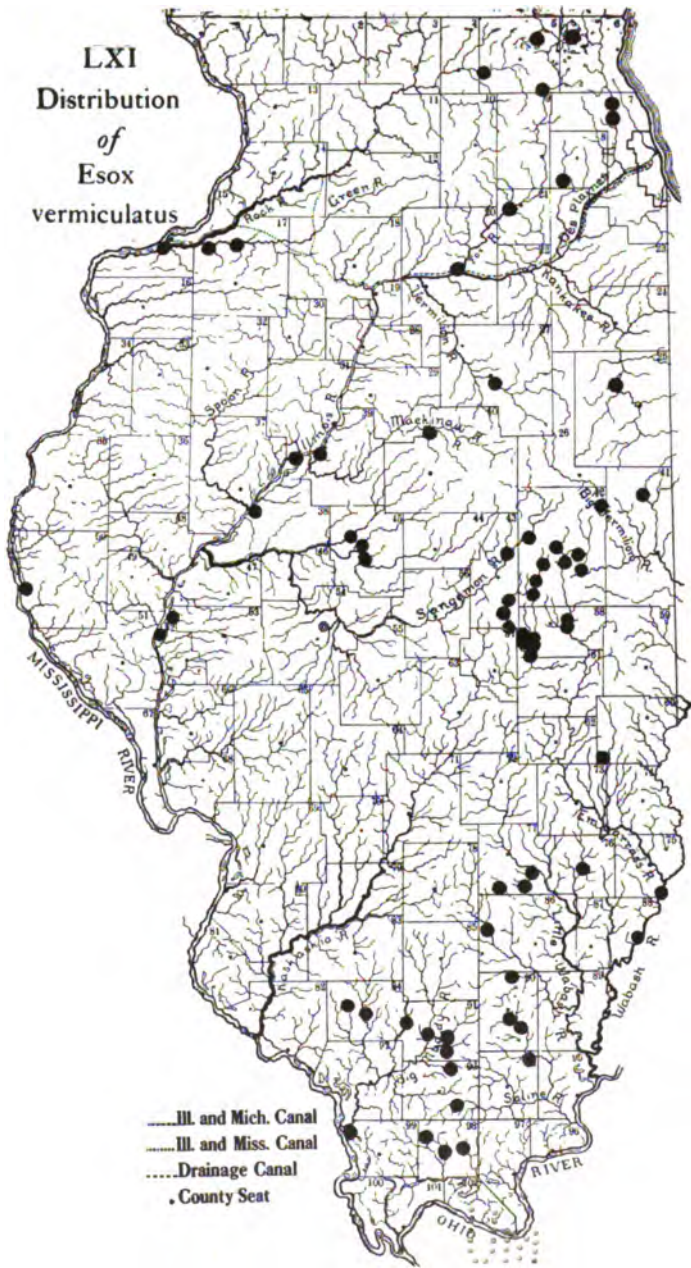


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LXI  
 Distribution  
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*Esox*  
*vermiculatus*



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LXII  
 Distribution  
 of  
*Esox*  
*lucius*





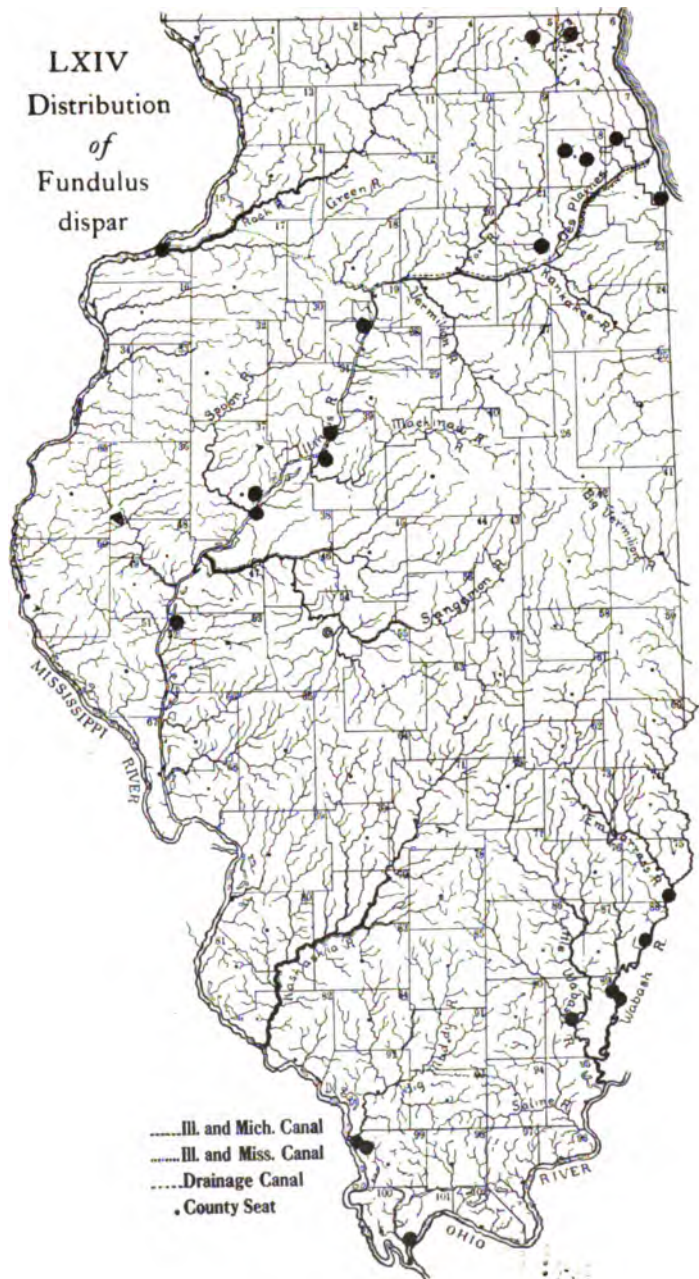
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LXIII  
 Distribution  
 of  
*Fundulus  
 diaphanus  
 menona*



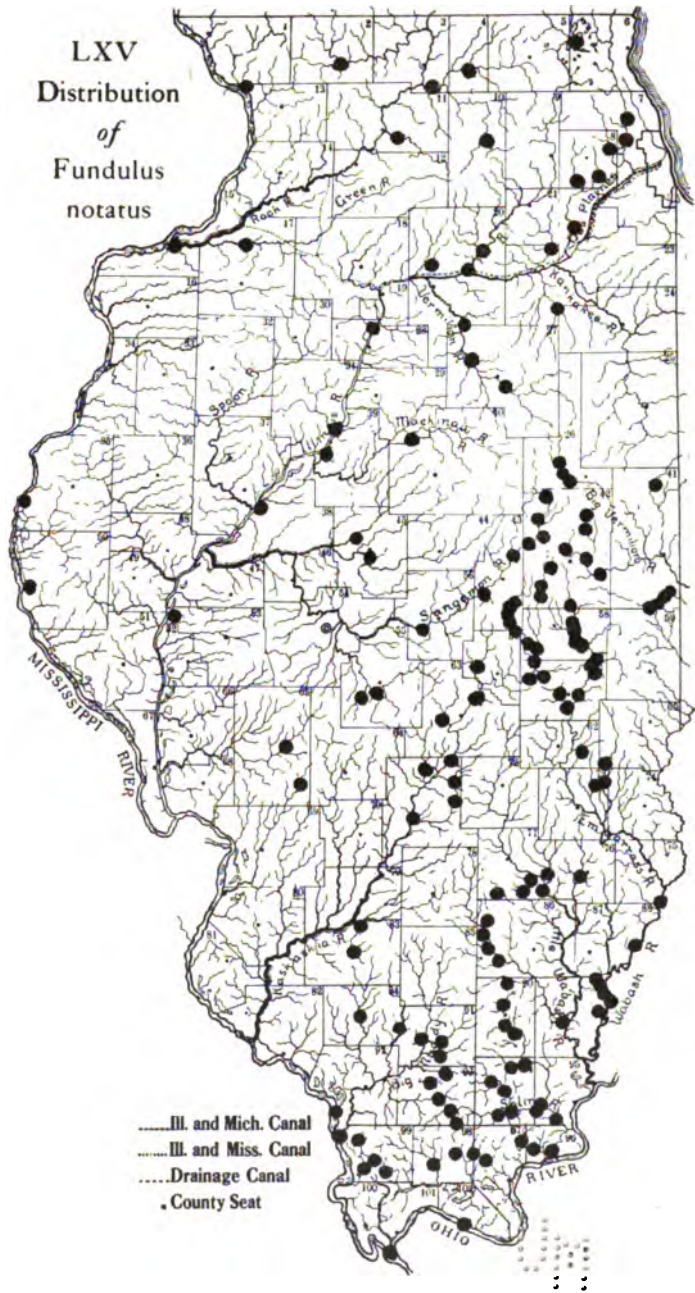
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LXIV  
 Distribution  
 of  
*Fundulus*  
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LXV  
 Distribution  
 of  
*Fundulus*  
*notatus*



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LXVI  
 Distribution  
 of  
*Gambusia*  
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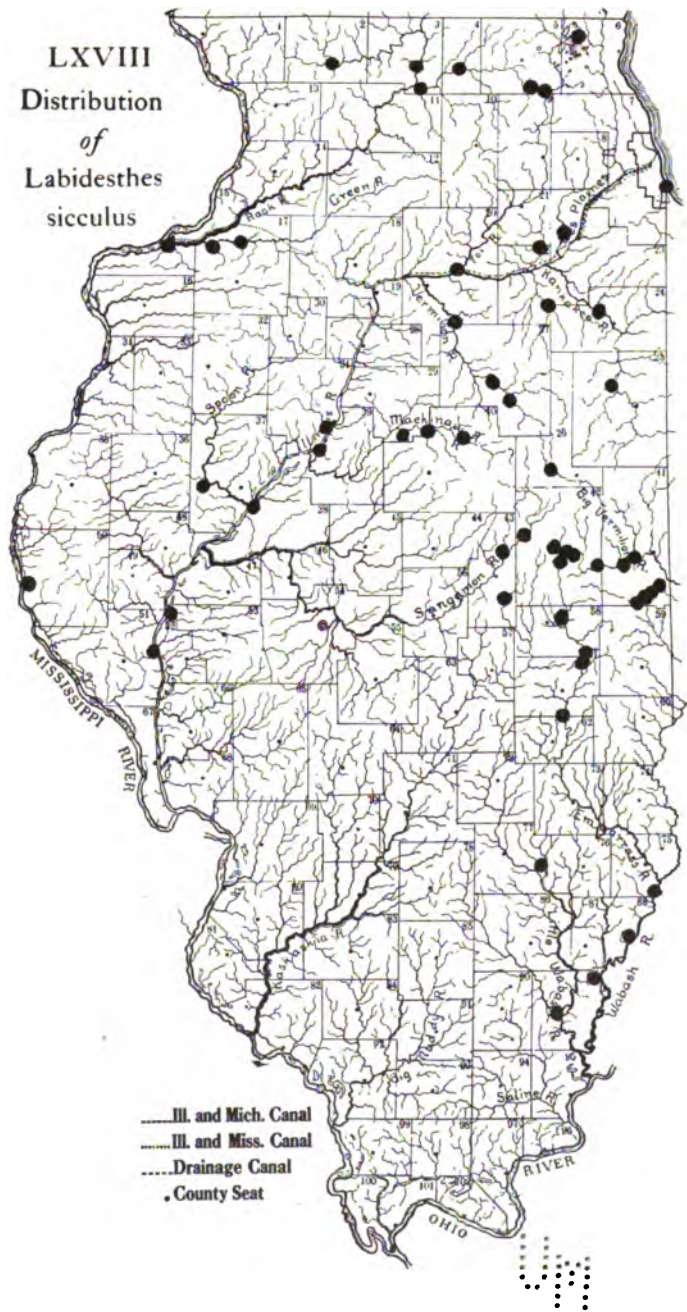
LXVII  
 Distribution  
 of  
*Percopsis*  
*guttatus*



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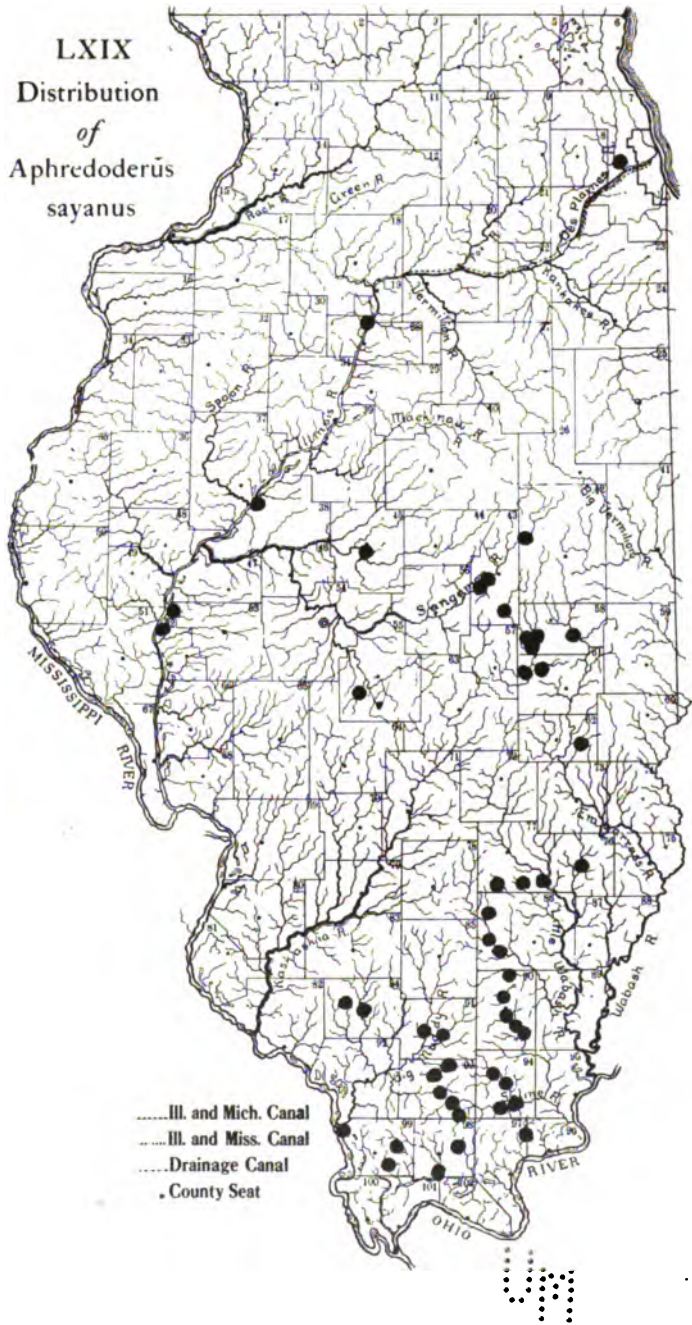
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LXVIII  
 Distribution  
 of  
*Labidesthes*  
*sicculus*



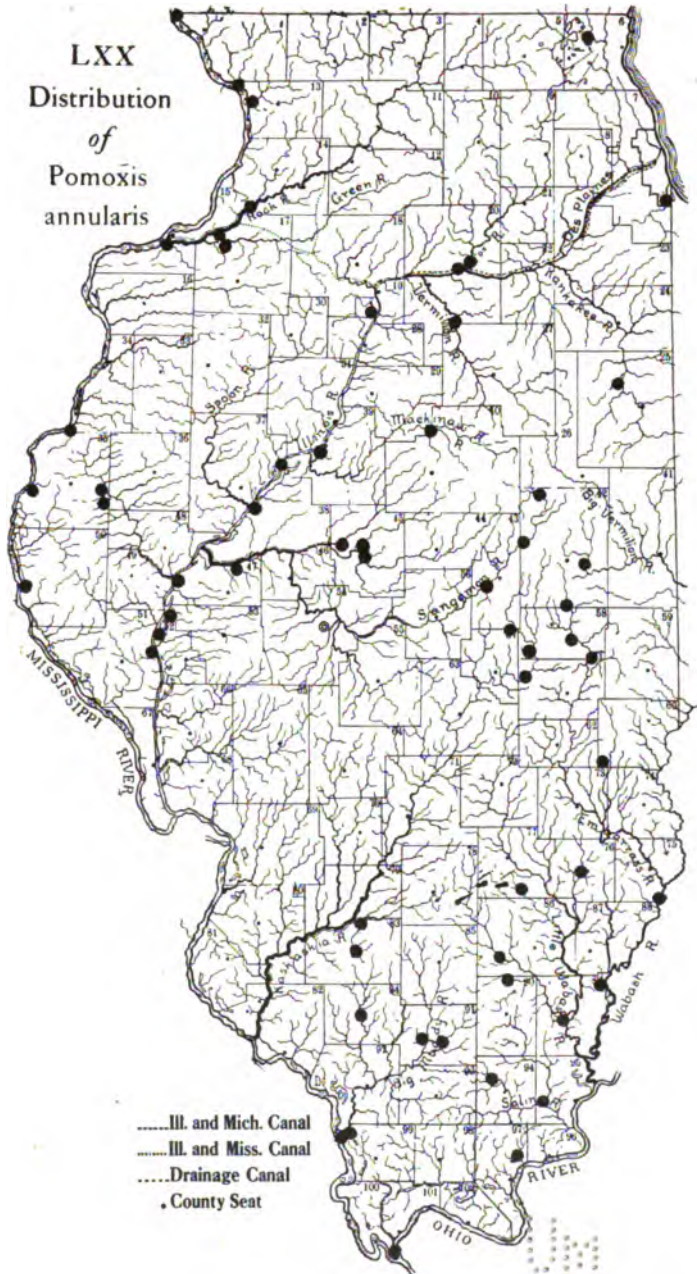
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LXIX  
 Distribution  
 of  
*Aphredoderus*  
*sayanus*



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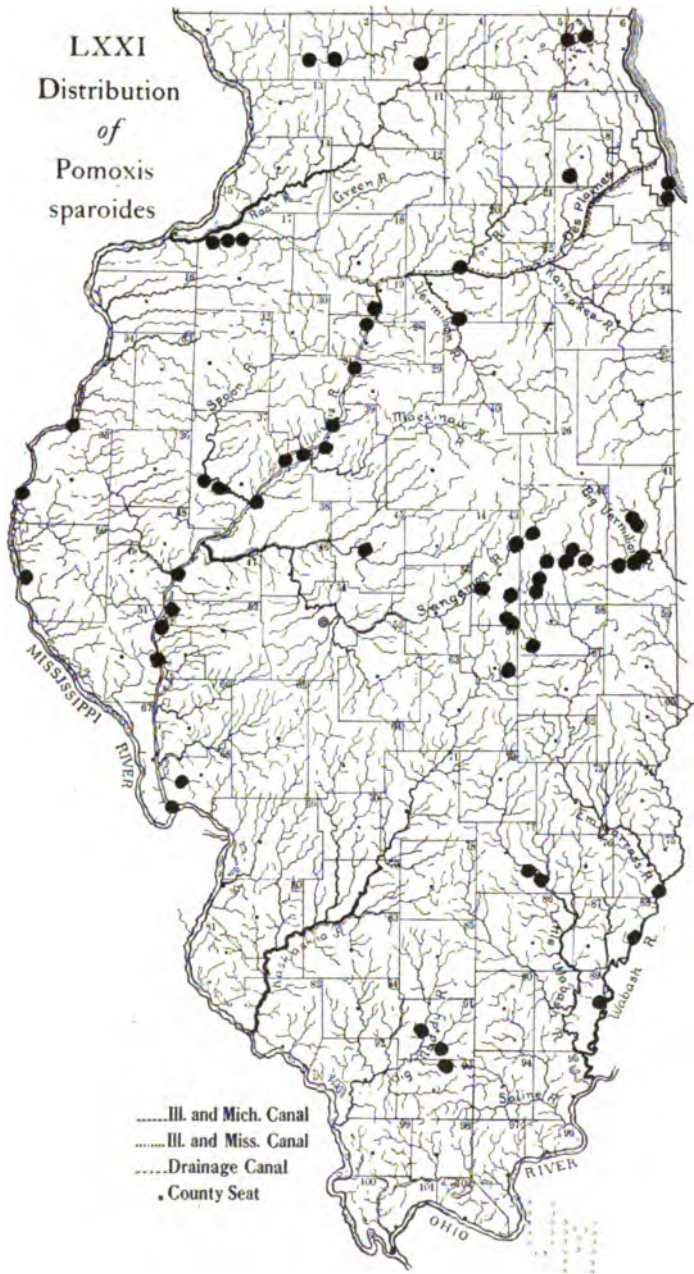
LXX  
 Distribution  
 of  
*Pomoxis*  
*annularis*





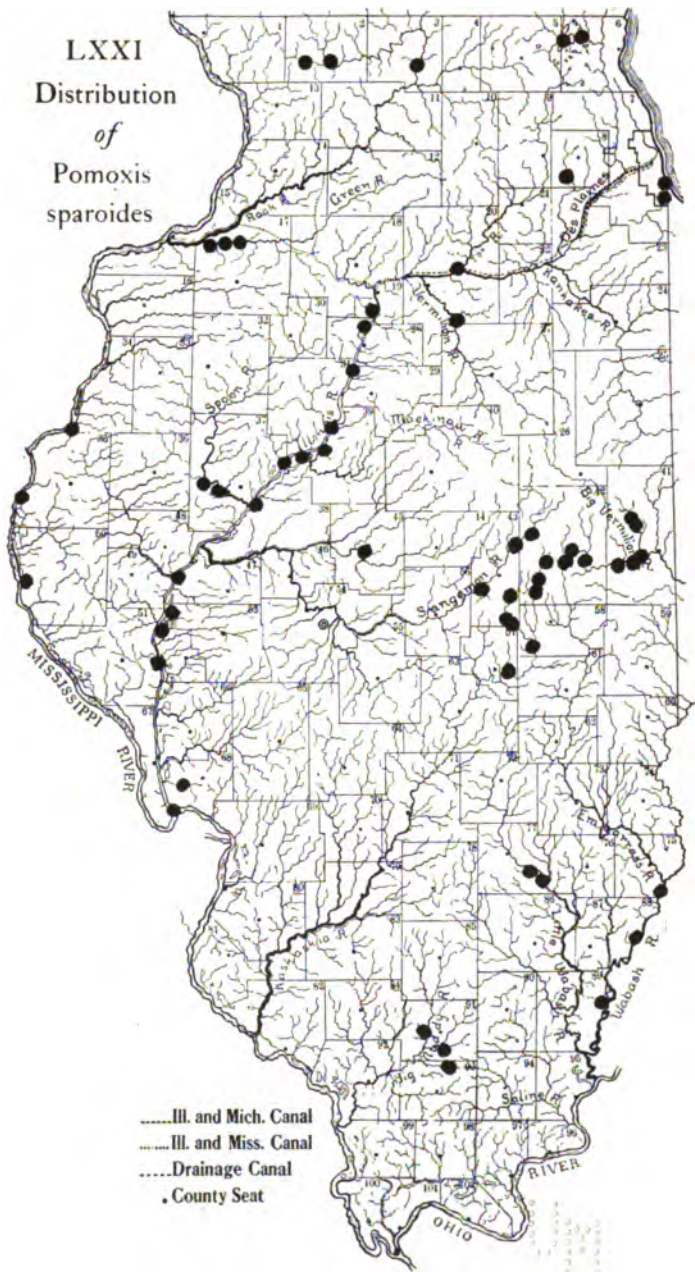
24

LXXI  
 Distribution  
 of  
*Pomoxis*  
*sparoides*



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LXXI  
 Distribution  
 of  
*Pomoxis*  
*sparoides*



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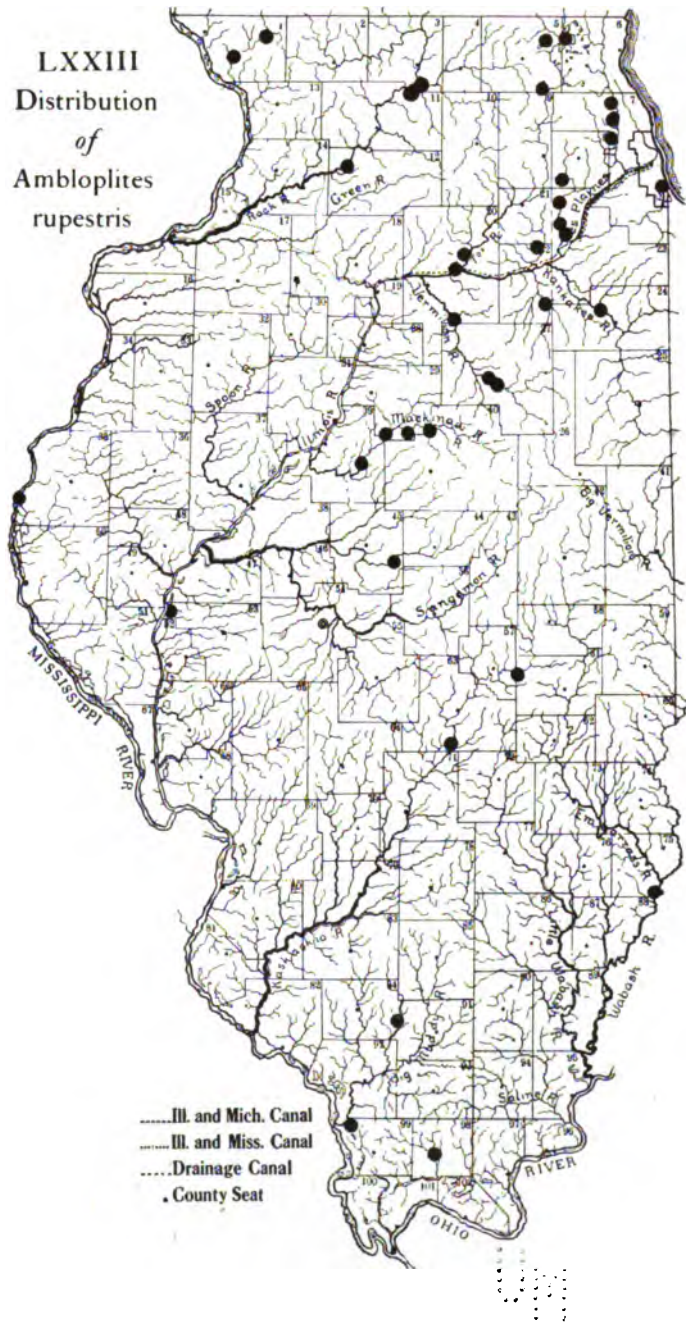
LXXII  
 Distribution  
 of  
*Centrarchus  
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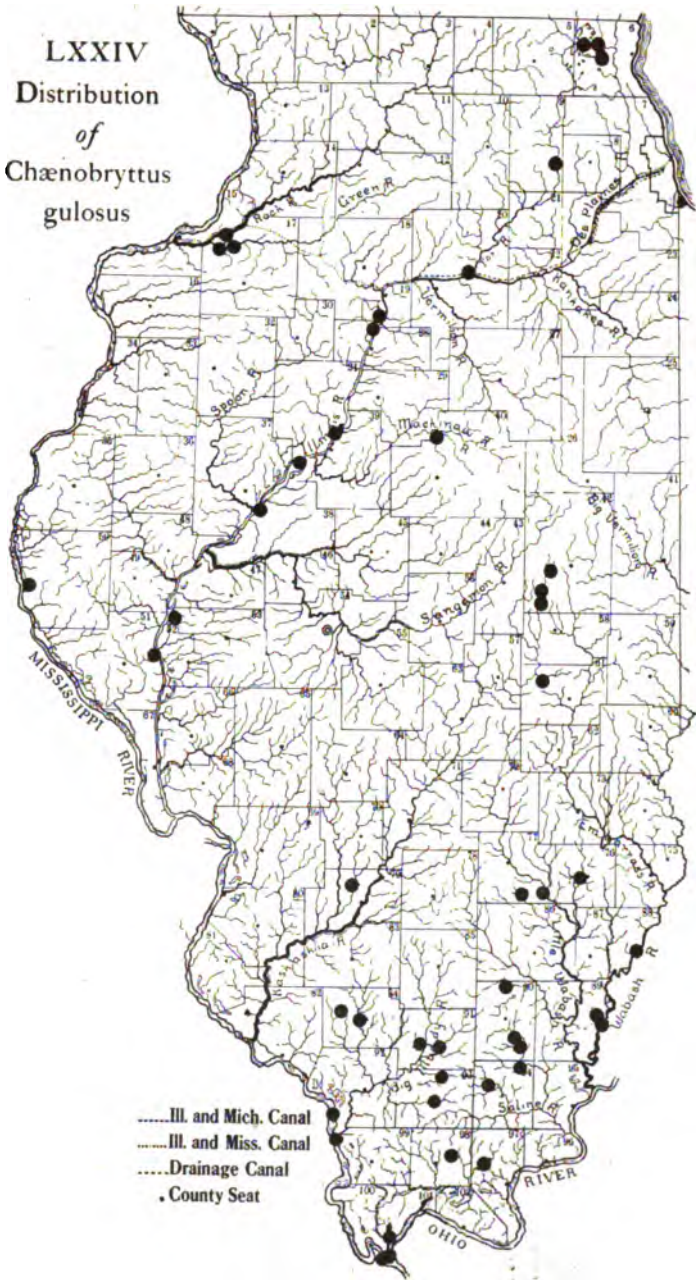
LXXIII  
 Distribution  
 of  
*Ambloplites*  
*rupestris*







LXXIV  
 Distribution  
 of  
*Chaenobryttus*  
*gulosus*

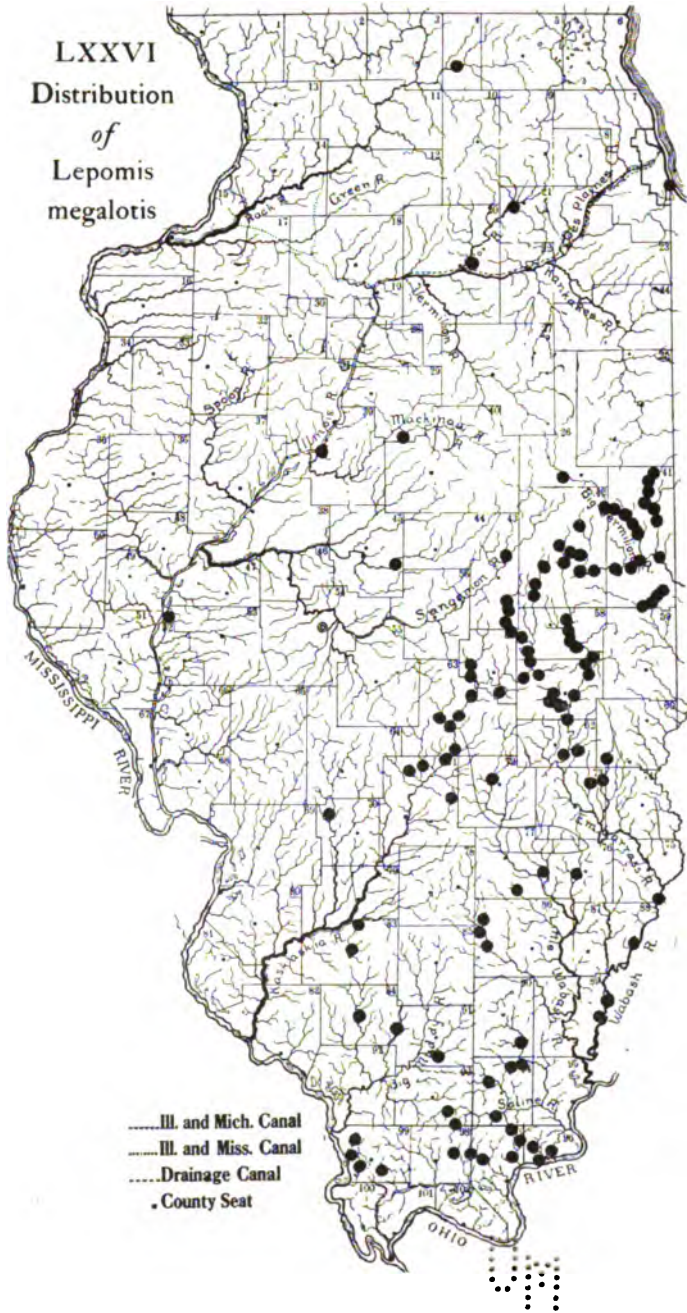


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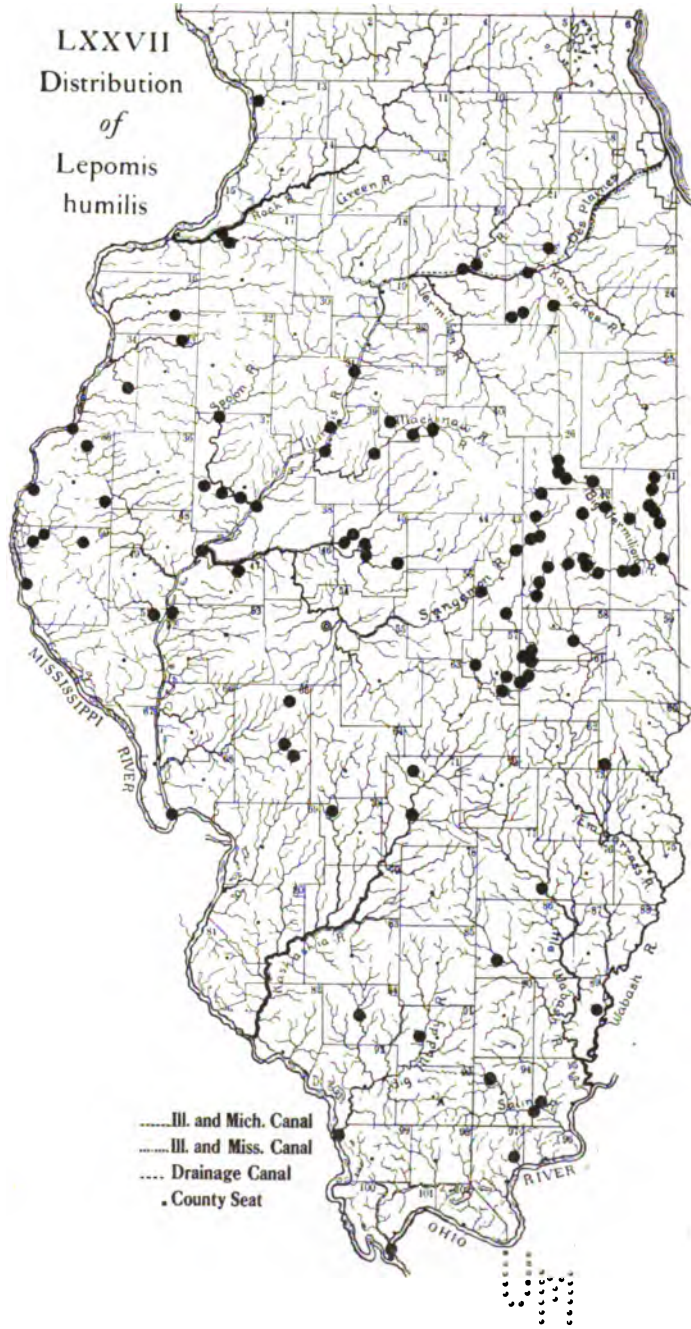
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LXXVI  
 Distribution  
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*Lepomis megalotis*



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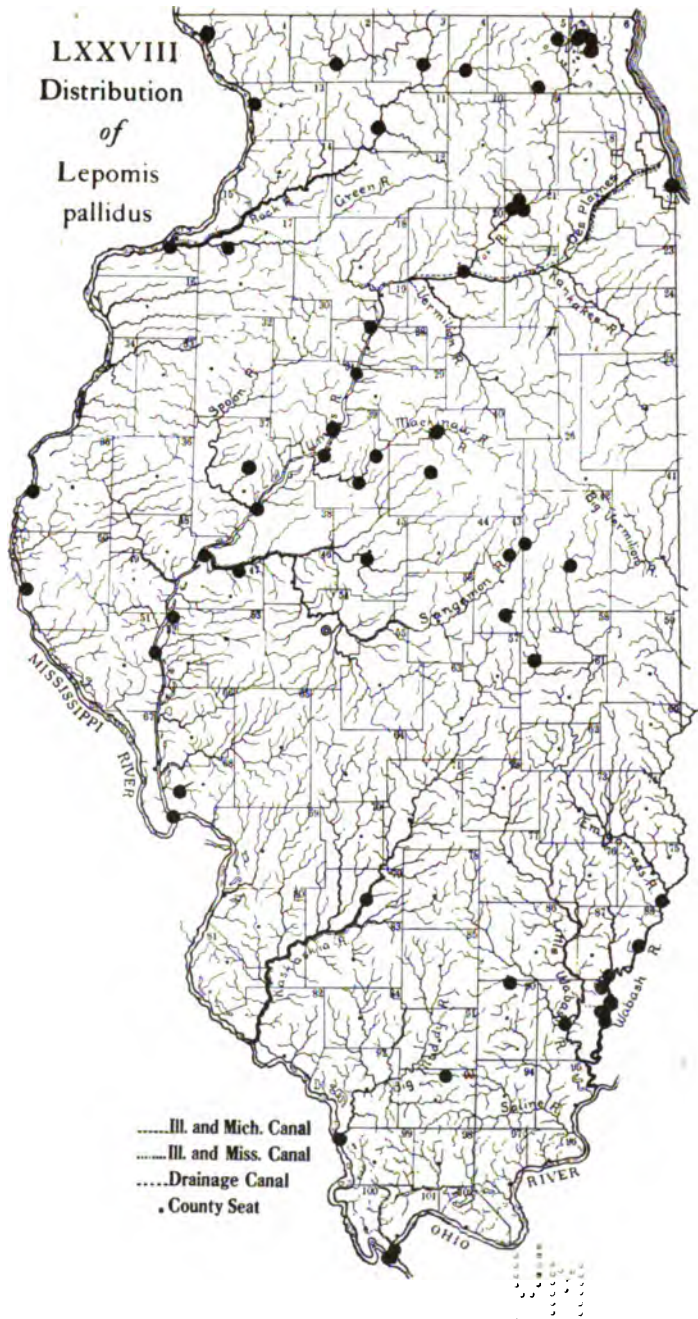
LXXVII  
 Distribution  
 of  
*Lepomis humilis*





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LXXVIII  
 Distribution  
 of  
*Lepomis pallidus*



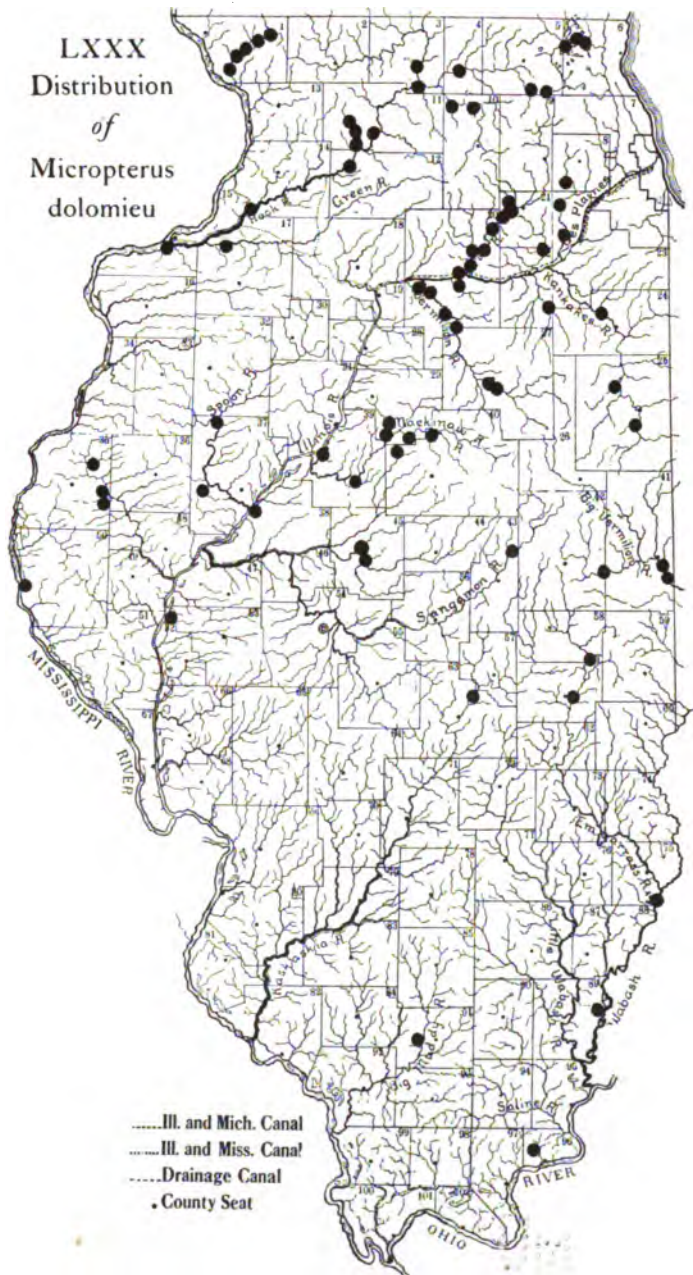
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LXXIX.  
 Distribution  
 of  
*Eupomotis*  
*gibbosus*



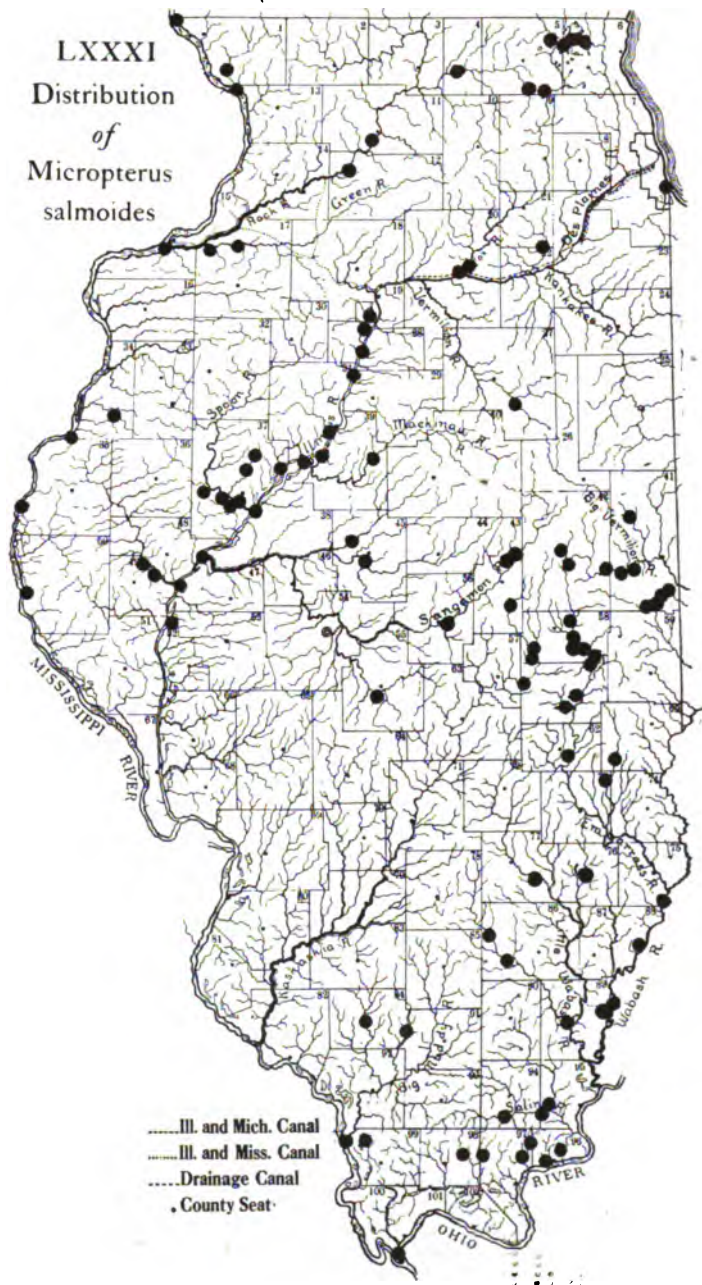
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LXXX  
 Distribution  
 of  
*Micropterus  
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LXXXI  
 Distribution  
 of  
*Micropterus  
 salmoides*

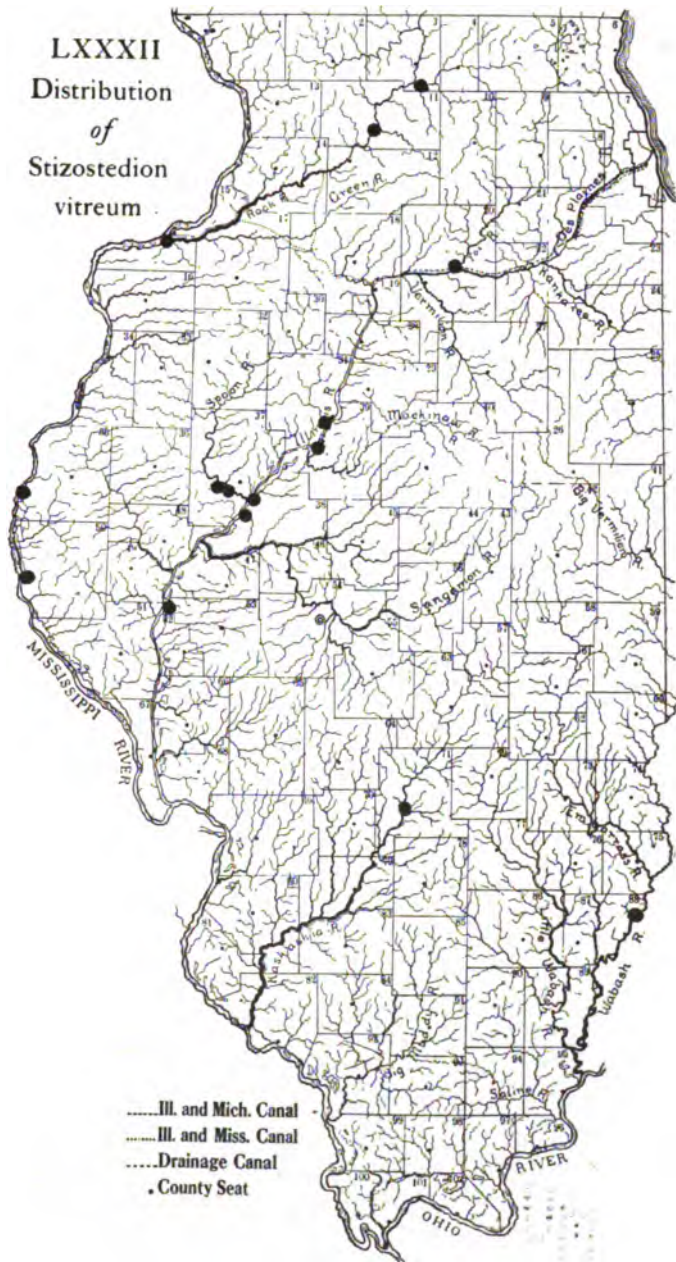


- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat



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LXXXII  
 Distribution  
 of  
*Stizostedion*  
*vitreum*



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LXXXIII  
 Distribution  
 of  
*Stizostedion  
 canadense  
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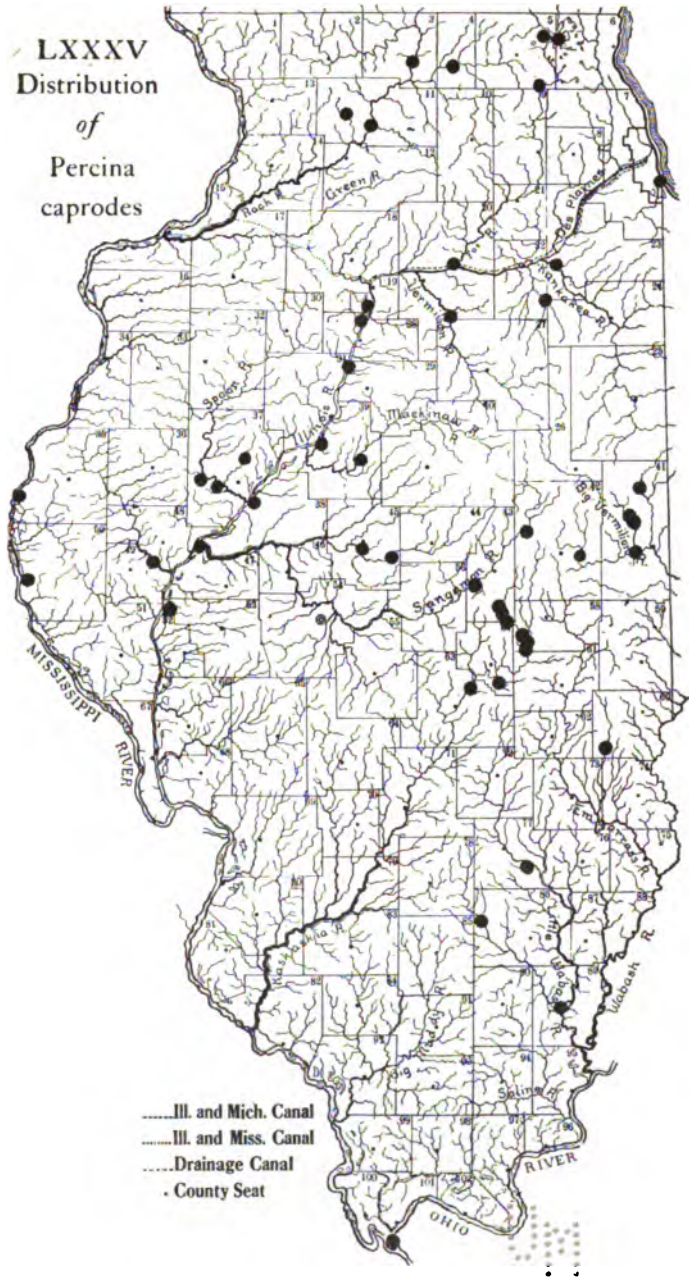


LXXXIV  
 Distribution  
 of  
*Perca  
 flavescens*



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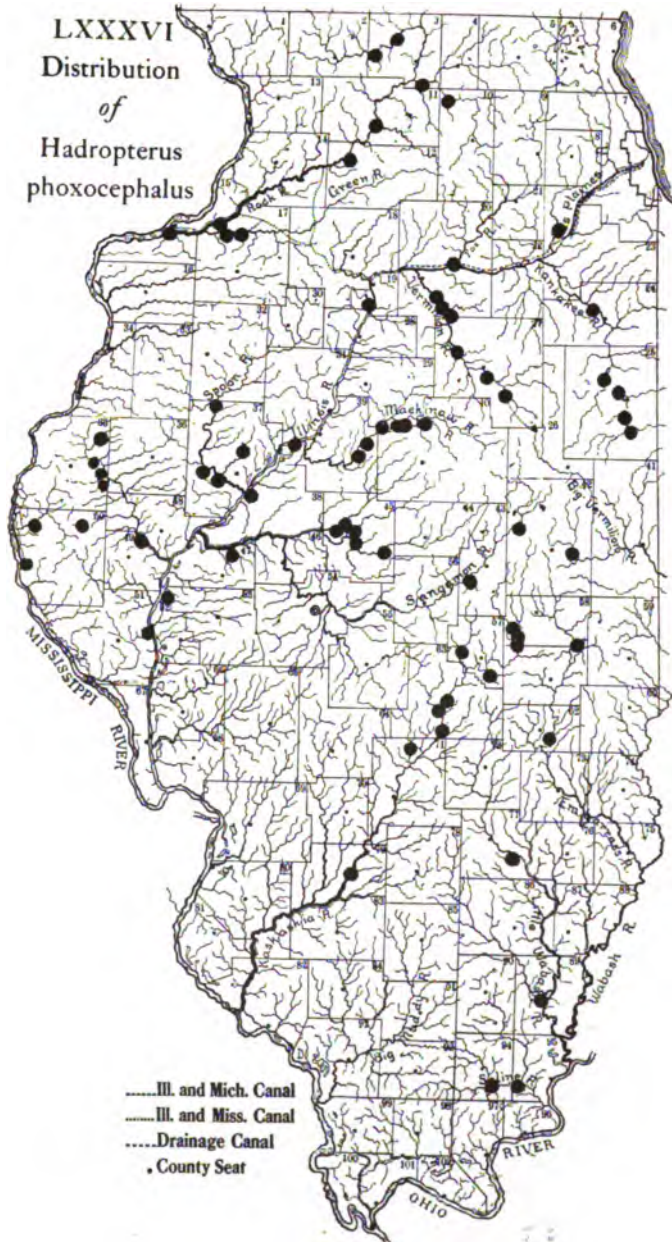
LXXXV  
 Distribution  
 of  
*Percina caprodes*





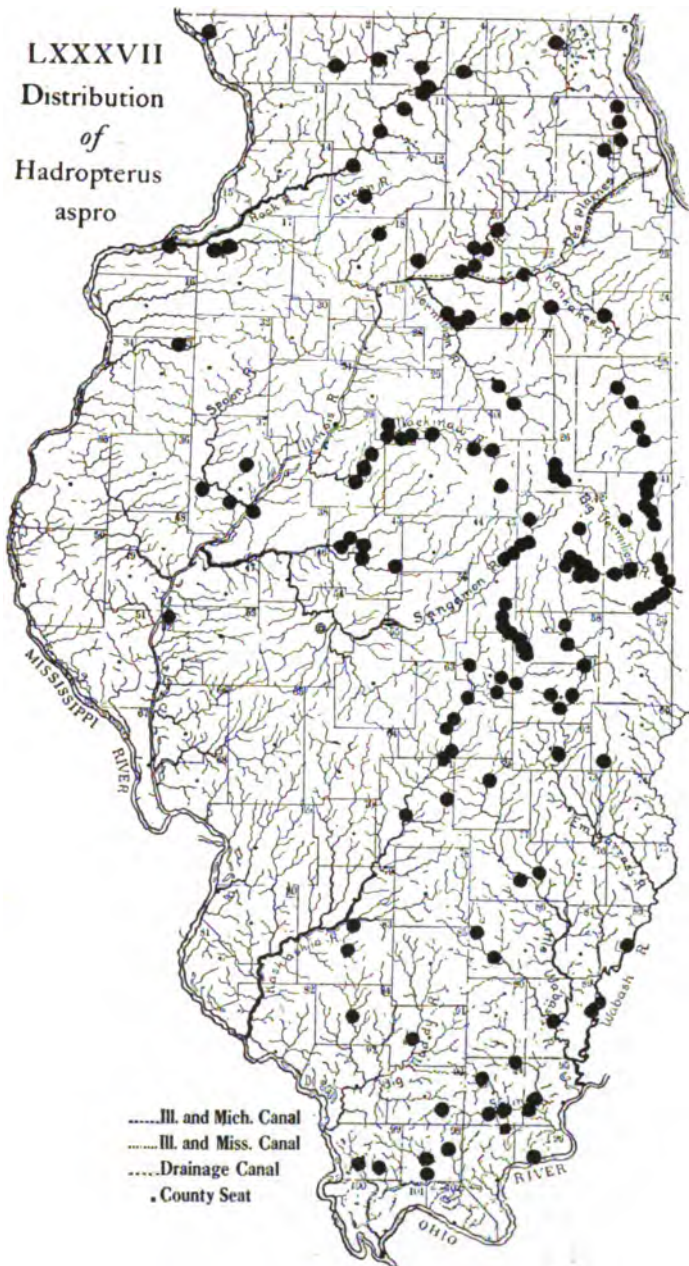


LXXXVI  
 Distribution  
 of  
*Hadropterus  
 phoxocephalus*



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LXXXVII  
 Distribution  
 of  
*Hadropterus*  
*aspro*



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LXXXVIII  
 Distribution  
 of  
*Cottogaster*  
*shumardi*



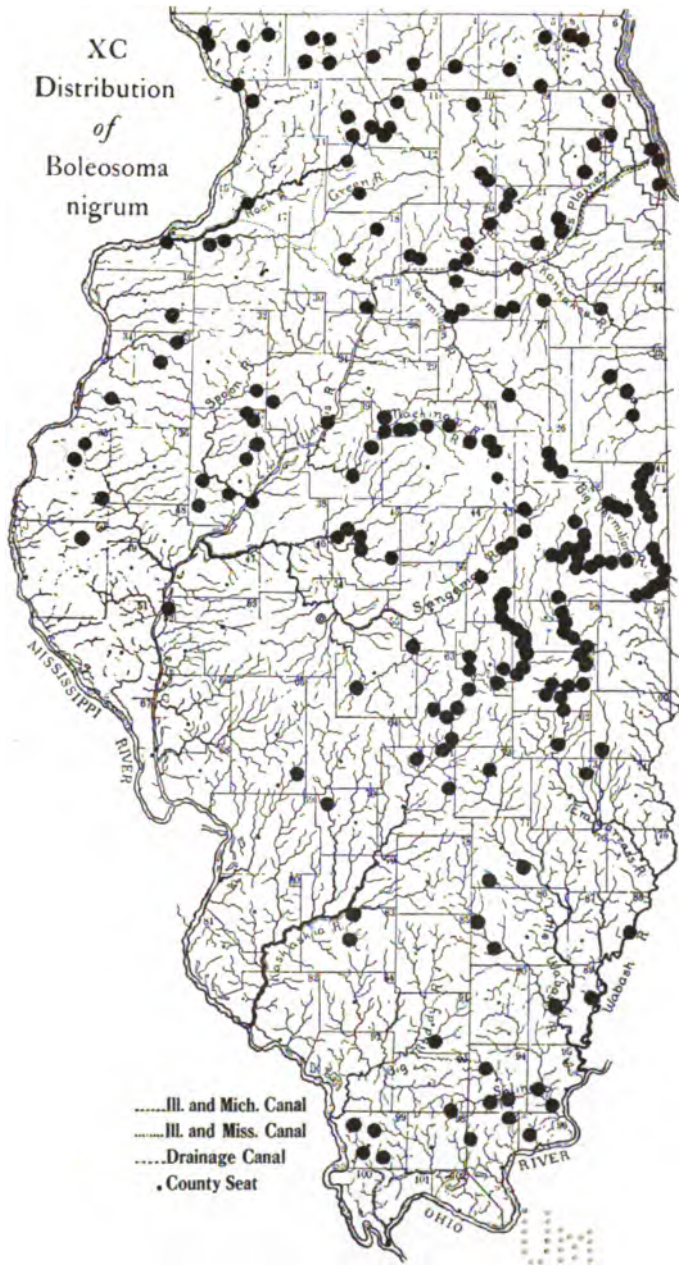






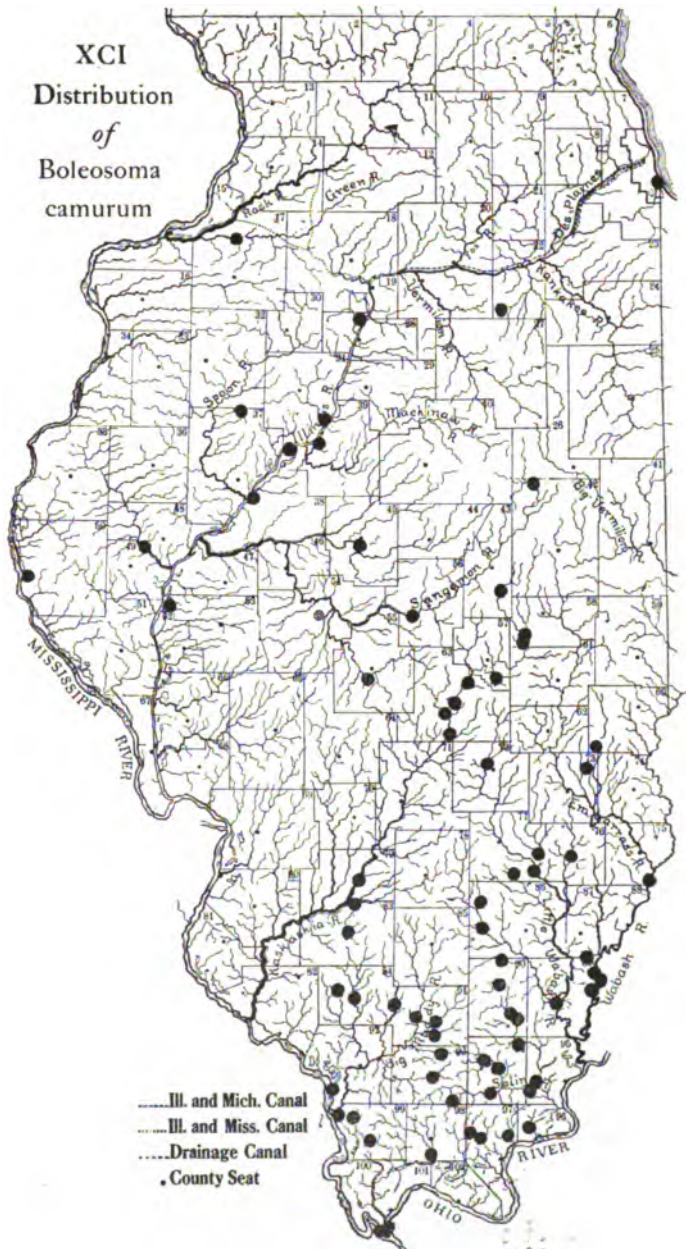
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XC  
Distribution  
of  
*Boleosoma*  
*nigrum*



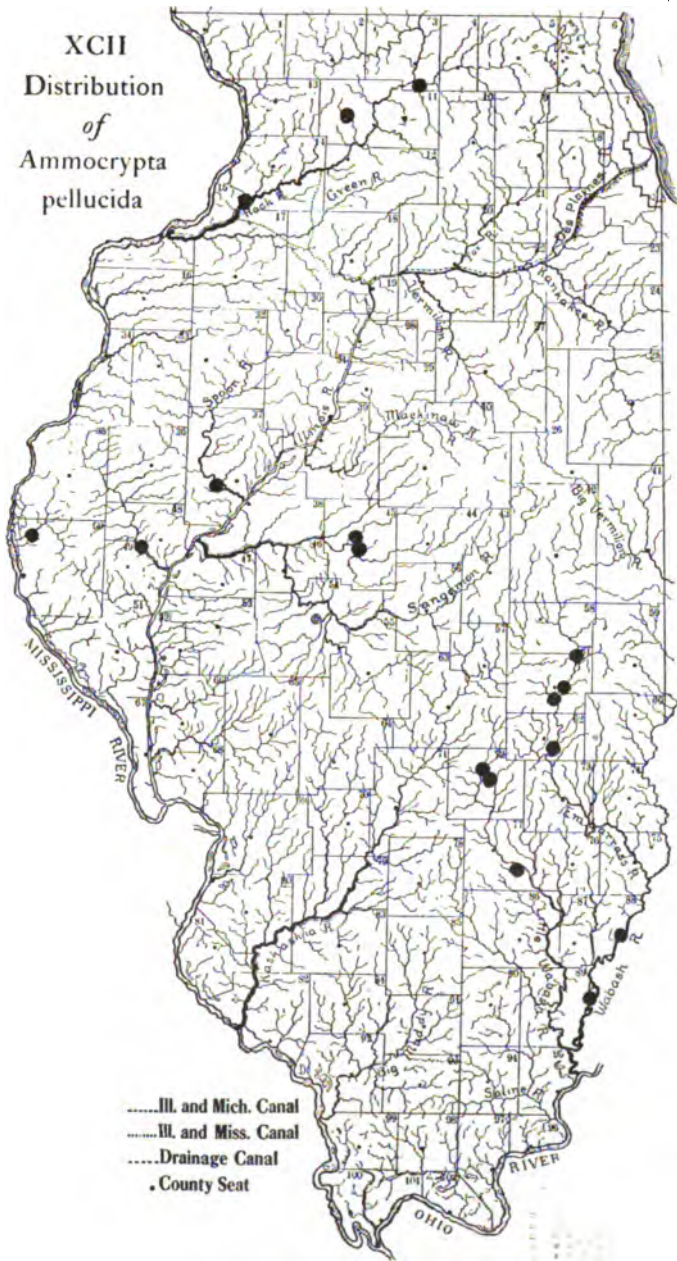
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XCI  
 Distribution  
 of  
*Boleosoma*  
*camurum*



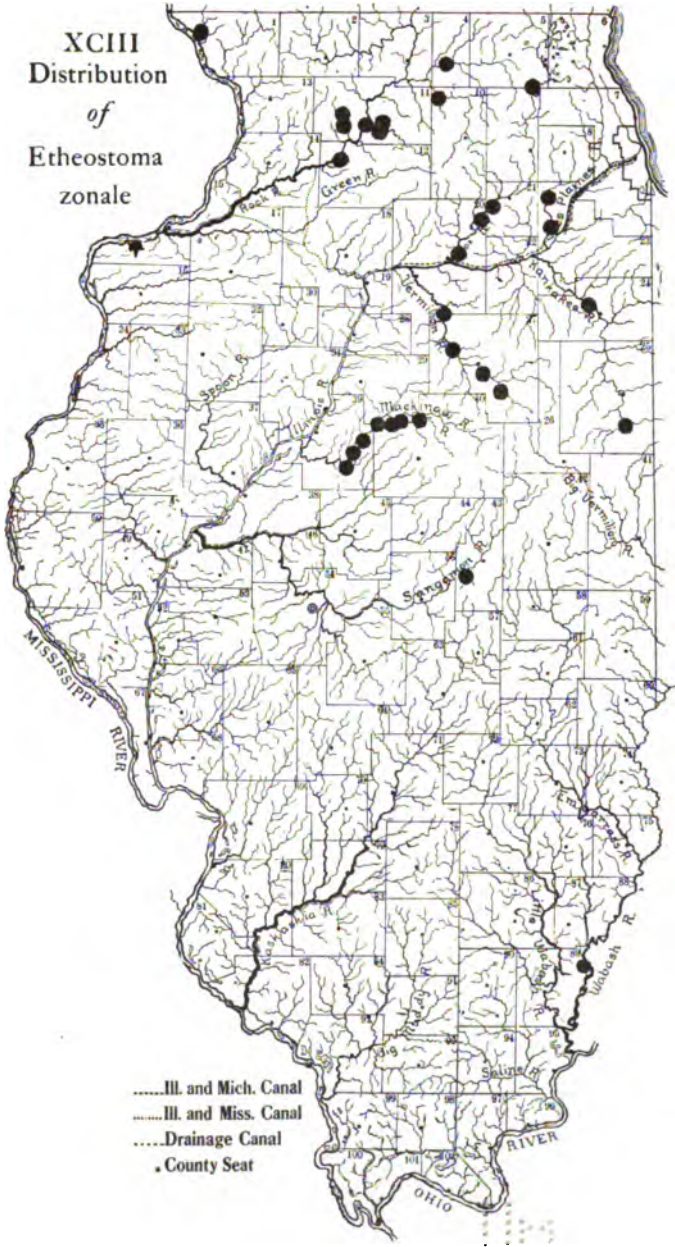
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XCII  
 Distribution  
 of  
*Ammocrypta*  
*pellucida*



4

XCIII  
 Distribution  
 of  
*Etheostoma*  
 zonale

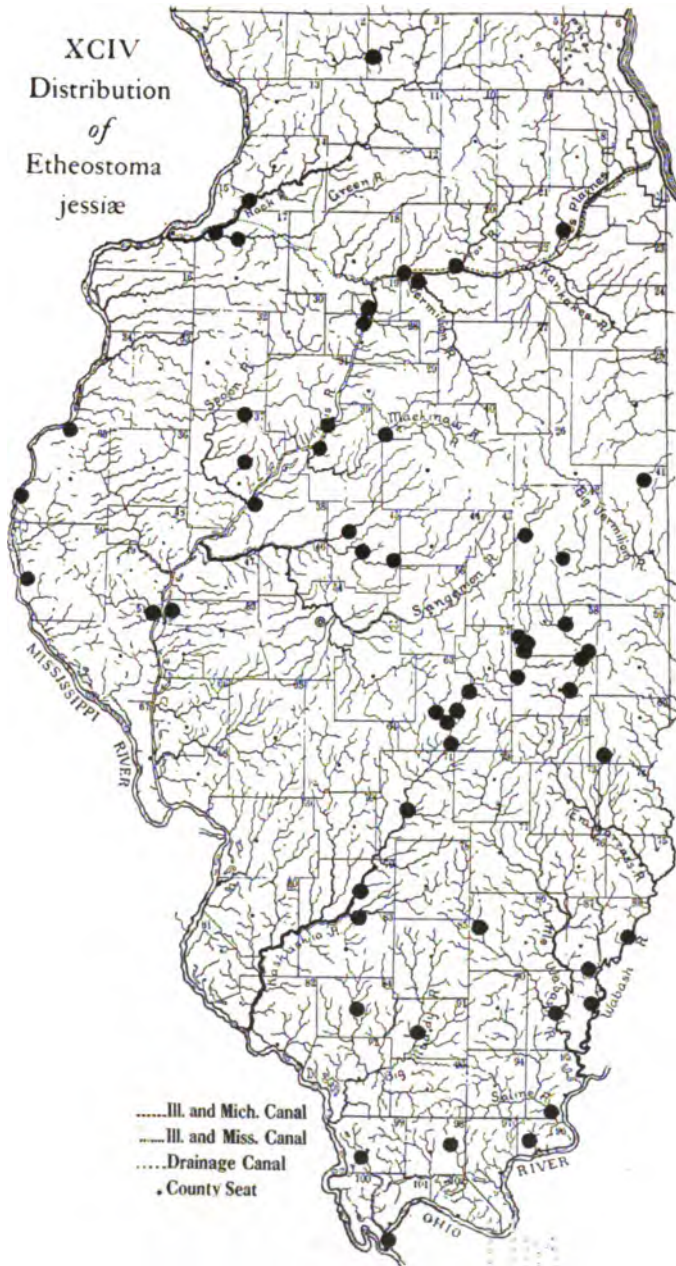


- .....Ill. and Mich. Canal
- Ill. and Miss. Canal
- .....Drainage Canal
- County Seat



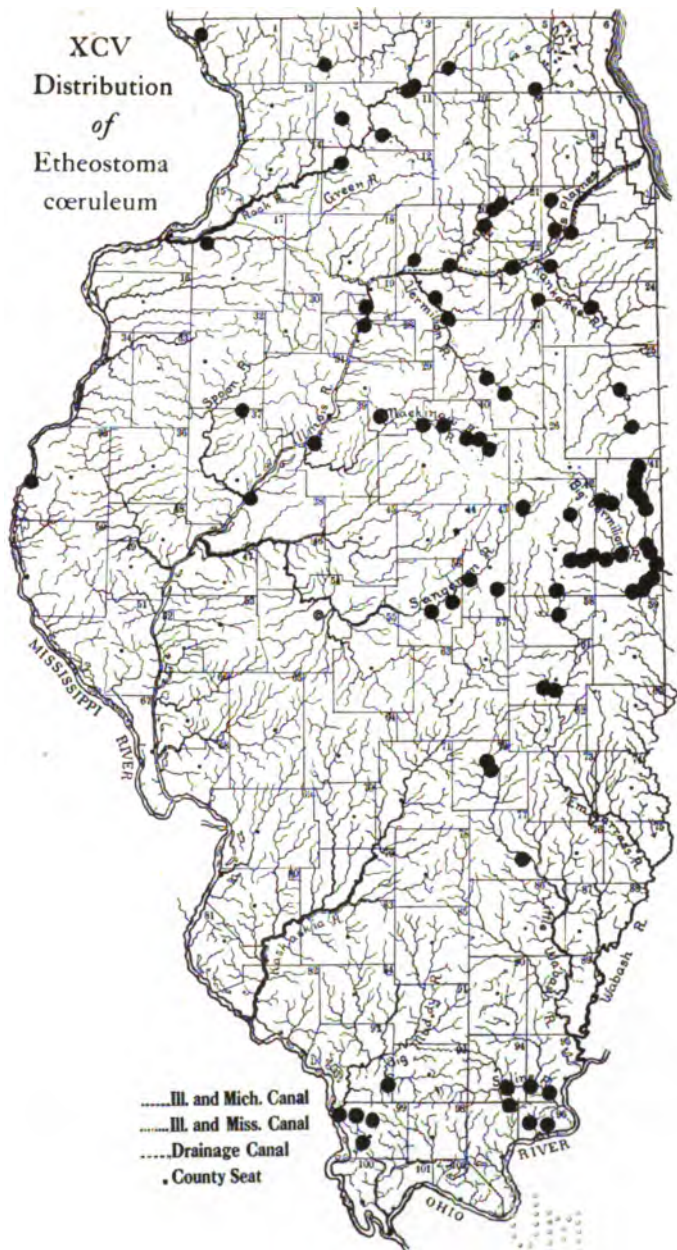


XCIV  
 Distribution  
 of  
*Etheostoma  
 jessiae*



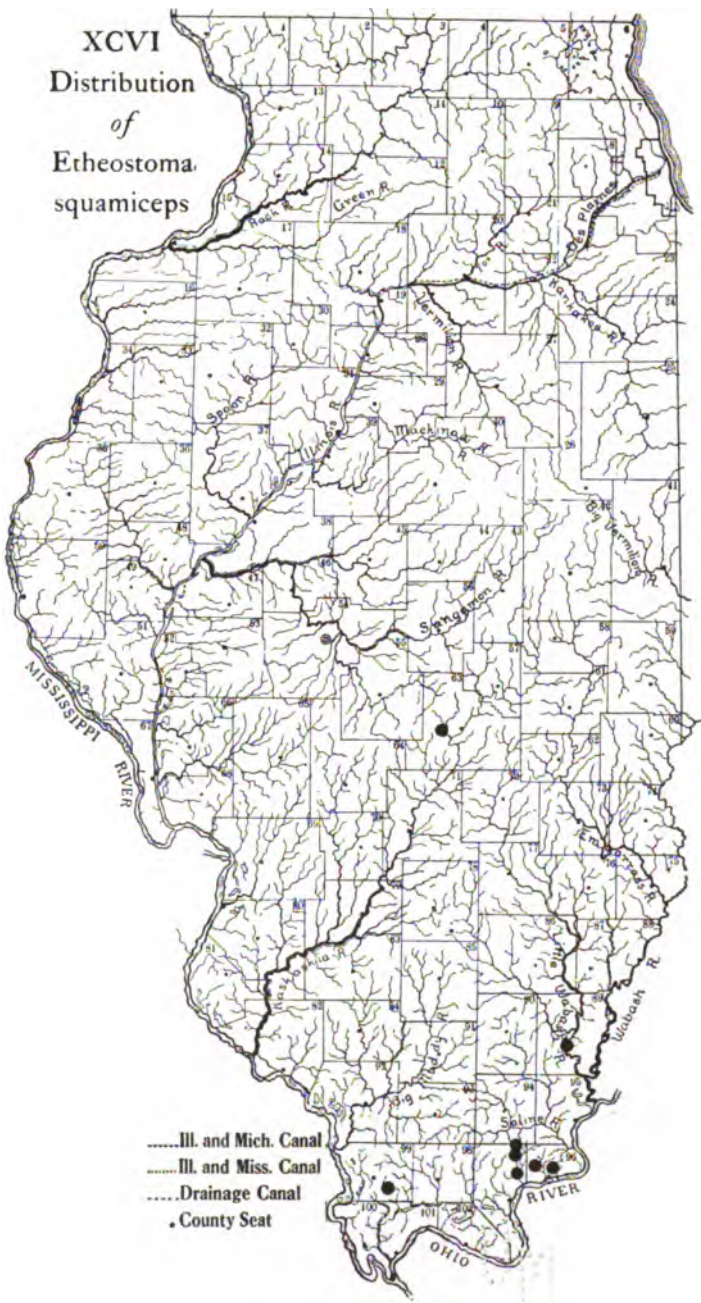


XCV  
 Distribution  
 of  
*Etheostoma*  
*coeruleum*





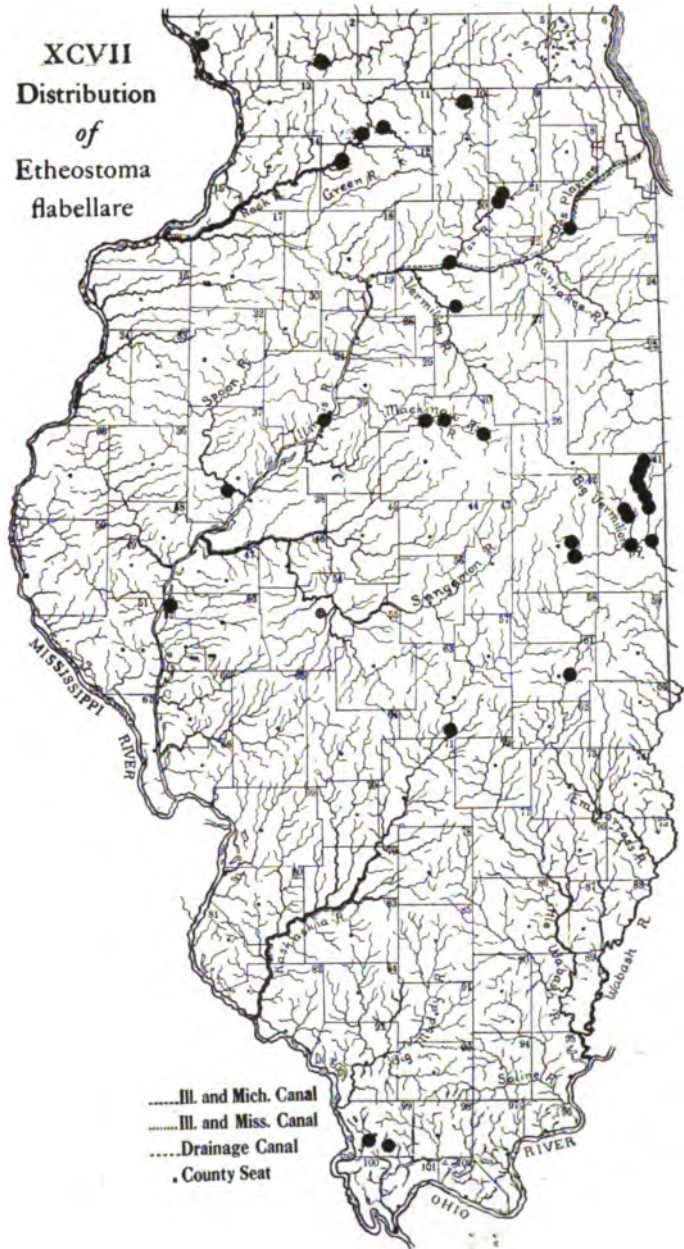
XCVI  
 Distribution  
 of  
*Etheostoma*  
*squamiceps*



- ..... Ill. and Mich. Canal
- Ill. and Miss. Canal
- ..... Drainage Canal
- County Seat

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XCVII  
 Distribution  
 of  
*Etheostoma*  
*flabellare*





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XCVIII  
 Distribution  
 of  
*Boleichthys*  
*fusiformis*





XCIX  
 Distribution  
 of  
*Microperca  
 punctulata*



44

C  
 Distribution  
 of  
*Roccus*  
*chrysops*





**CI**  
**Distribution**  
*of*  
**Morone**  
**interrupta**



- .....Ill. and Mich. Canal
- .....Ill. and Miss. Canal
- .....Drainage Canal
- County Seat



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CII  
 Distribution  
 of  
*Aplodinotus*  
*grunniens*



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